GENERAL EMBRYOLOGICAL INFORMATION SERVICE

VOLUME 13

data collected during 1969

Utrecht-Netherlands

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Issued by the Hubrecht Laboratory
on behalf of the
General Embryological Information Service Foundation

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Edited by Prof. P. D. Nieuwkoop,
Director of the Hubrecht Laboratory

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Hubrecht Laboratory
Uppsalalaan 1
Universiteitscentrum 'De Uithof'
UTRECHT, Netherlands

Printed in the Netherlands, 1970

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INTRODUCTION

In this volume the organization of the various sections has remained unaltered. The cover and title page have been changed in conformity with current bibliographical practice.

We continue our efforts to expand the coverage of the Service. New countries listed are Ireland, Jamaica, and Zambia. As a further example we may mention that the amount of information listed with regard to the developmental biology of unicellular organisms and plants (including slime molds) has increased by nearly 50 %. The number of book notices has again increased considerably.

Information concerning the *Hubrecht Laboratory* may be found on page . For information regarding the *"International Society of Developmental Biologists"* (formerly I.I.E.), including the latest membership list, see page .

P. D. NIEUWKOOP

J. FABER

B. Z. SALOMÉ

DIRECTORY OF NAMES AND ADDRESSES

with Subjects of Research

(alphabetical order)

• = Members of the "International Society of Developmental Biologists" (formerly I.I.E.)

AARON, C. Dr.en Méd. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, 75 PARIS VIe, France

ABBOTT, Miss U. Ph.D., Prof. — Developm. Biol. Program, Natl. Sci. Found., WASHINGTON, D.C. 20550, U.S.A. •

ABELOOS, M. Prof. — Lab. de Biol. Génér., Fac. des Sci., Place Victor Hugo, MARSEILLE, France

ABERCROMBIE, M. Prof. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England •

a Study of cell relations in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with Mrs. J. E. M. HEAYSMAN (WAKELING) and Mrs. S. M. PEGRUM (HALL))

ABRAMOVICI, A. Dr. ès Sci. — Dept. of Embryol. and Teratol., Med. School, Tel-Aviv Univ., TEL-AVIV, Israel

a Fat-soluble vitamins and their inhibitors causing abnormal development of the embryo. *Gallus gallus (Aves)*

b Developmental physiology and physiopathology of extraembryonic fluids and plasma. *Gallus gallus (Aves)*

ÅBRO, A. — Inst. of Anat., Univ. of Bergen, BERGEN, Aarstadvollen, Norway

a Embryology of the testis. *Sorex* spec., *Neomys* spec. *(Insectivora)*

ABU-SINNA, G. M. E. B.Sc. — Dept. of Zool., Fac. of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt

ACHAZI, R. K. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Study of enzyme activity (tyrosinase) during Wolffian lens regeneration. *Triturus viridescens (Urodela)*

ACHTELIG, M. Dr. — Zool. Inst. der Univ., Röntgenring 10, 87 WÜRZBURG, W. Germany

a Studies on the importance of the oosome for the early embryology of *Pimpla turionellae (Ichneumonidae, Hymenoptera)*

ACHTELIK, W. Ph.D. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE, 8, Poland

a Histochemical studies in regeneration and differentiation of embryonal tissues under the influence of hormones and antimetabolites. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

ACKERMAN, G. A. M.D., Ph.D., Prof. — Dept. of Anat., Ohio State Univ., 1645 Neil Ave., COLOMBUS, Ohio 43210, U.S.A.

a Morphology and histochemistry of the hemopoietic system in embryonic and adult condition. *Gallus domesticus (Aves), Homo sapiens* and other spp. *(Mammalia)*

ACTON, A. B. D.Phil. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Electron microscope study of the developing male accessory glands. *Drosophila melanogaster (Diptera)*

ADACHI, H. M.Sc. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan

a Studies on the species-specific antigenicities of the cell membrane. *Mus musculus (Rodentia)*

b Immunological analysis of the structural molecules of the erythrocyte membrane. *Mus musculus (Rodentia)*

ADAMS, T. Ph.D. — USDA Metab. & Radiat. Research Lab., State Univ. Station, FARGO, 307 Huntingdon Rd., CAMBRIDGE, England

a Development of ova (preimplantation stages) with special reference to the maternal environment using the egg transfer technique. *Oryctolagus cuniculus (Lagomorpha)*

b Sperm transport and quantitative aspects of fertilization. *Oryctolagus cuniculus (Lagomorpha)*

ADAMS, T. . Ph.D. — USDA Metab. & Radiat. Research Lab., State Univ. Station, FARGO, N.D. 58103, U.S.A.

a Endocrine regulation of ovary maturation. *Musca domestica (Diptera)*

b Use of endocrines to disrupt morphogenesis. *Musca domestica (Diptera)*

ADAMS SMITH, W N. D.Phil., Prof. — Dept. of Anat., Med. Coll. of South Carolina, 80 Barre St., CHARLESTON, S.C. 29401, U.S.A.

a Teratogenic influences of a variety of known teratogens upon heart development. *Rattus norvegicus (Rodentia)*

b Influence of sex hormones upon the sexual maturation of the developing brain. *Rattus norvegicus (Rodentia)*

ADAMSTONE, F. B. Ph.D., Prof. (Emer.) — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A.

ADELMANN, H. B. Dr., Prof. (Emer.) — Div. of Biol. Sci., Cornell Univ., Stimson Hall, ITHACA, N.Y. 14850, U.S.A. •

ADINOLFI, M. M.D., Ph.D. — Paediat. Research Unit, Guy's Hosp. Med. School, LONDON S.E.1, England

a Studies on the ontogenesis of components of complement and lysozyme, using in vitro cultures of foetal tissues and analysis of the newly synthesized proteins by means of autoradiography of immunoelectrophoretic plates. *Homo sapiens (Primates)*

b The development of the histocompatibility antigens during life in utero, using extracts from foetal tissues and the inhibition of cytotoxic antibodies. *Homo sapiens (Primates)*

ADLER, R. M.D. — Inst. de Anat. Gen. y Embriol., Fac. de Med., Paraguay 2155, BUENOS AIRES, Argentina
— temporarily: Hubrecht Lab. (Intern. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum „De Uithof", UTRECHT, Netherlands

a Experimental neuroembryology. *Gallus domesticus (Aves)*

b Electron microscopy of developing nervous system. *Gallus domesticus (Aves)*

c Dis- and reaggregation studies of neural tube development. *Gallus domesticus (Aves)*

AESCHLIMANN, A. Dr.phil.II — Schweiz. Tropeninst., Socinstr. 57, 4000 BASEL, Switzerland

a Spermatogenese, Ovogenese, Embryonalentwicklung und Endocrinologie. *(Ixodoidea, Acarina, Arachnoidea)* (in collaboration with R. GEIGY)

b Uebertragung von Spirochaetosen über das mütterliche Ovarium auf die Embryonen und damit auf die Nachkommen der nächsten Generation. *(Argasidae, Acarina, Arachnoidea)* (in collaboration with R. GEIGY)

AFONYA, I. I. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria

AFZELIUS, B. A. Fil.Dr. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden •

a Fine structure of germ cells. *(Invertebrata; Vertebrata)*

AGARWAL, L. P. Prof. — Dr. Rajendra Prasad Center for Ophthalm. Sci., All India Inst. of Med. Sci., NEW DELHI-16, India

a Lens regeneration after intracapsular and extracapsular lens extraction, with and without implantation of embryonal ocular tissue. *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with S. K. ANGRA)

b Lens regeneration after extracapsular lens extraction and implantation with 20-methyl cholanthrene. *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with S. K. ANGRA)

c Ocular embryonal tissue implants in the anterior chamber of the eye. *Oryctolagus cuniculus (Lagomorpha)* (in collaboration with S. K. ANGRA)

d Biochemical assay of regenerates (amino acids and RNA, DNA). *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with S. K. ANGRA)

e Regeneration of iris after iridectomies. *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with S. K. ANGRA)

AGARWAL, Mrs. P. M.S. — Dept. of Anat., Med. Coll., NAGPUR-3, M.S., India

a Differentiation of Remak's ganglion. *Gallus domesticus (Aves)*

AGERBAK, Miss G. S. B.Sc. — Microbial Genet. Research Unit, Hammersmith Hosp., LONDON W.12, England

AGRELL, I. P. S. Fil.Dr., Prof. — Zoophysiol. Inst., Univ. of Lund, Helgonavägen 3, 223 62 LUND, Sweden •

a Polyamines in developing larvae. *Calliphora* spec. *(Diptera)*

AISENSTADT, T. B. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Effect of gonadotropins and changes in the germinal vesicle and in the oocyte cytoplasm during maturation. *(Acipenseridae, Chondrostei; Amphibia)* (in collaboration with Mrs. T. A. DETTLAFF)

ÅKESSON, B. Fil.dr. — Zootom. Dept., Zool. Inst., Univ. of Lund, Helgonavägen 3, S-223 62 LUND, Sweden

AKETA, K. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan •

AKHABADZE, L. V. Cand.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Regeneration of myocardium. *Rattus norvegicus, Canis familiaris, Felis domestica, Oryctolagus cuniculus (Mammalia)*

ALBANESE (CARMIGNANI), Mrs. M. P. — Ist. di Zool. e di Anat. Comp., Fac. di Sci., Univ. di Messina, Via dei Verdi 75, 98100 MESSINA, Italy

a The behaviour of the nucleolar apparatus of oocytes in the growing phase in relation to that of the yolk globules. *Coris julis (Labridae, Teleostei)*

b The formation of the yolk globules; the aspects of the yolk globules in relation to the vitelline membrane and to the nucleolus *Antedon rosacea (Crinoidea)*

ALBERGHINA (TONINI), Mrs. F. D.Sc. — Ist. di Genet., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy

a Development and cytology of cultured cells. *Drosophila melanogaster (Diptera)*

ALBERT, J. Dr. en Biol.Anim. — Lab. de Biol. Anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, 33 TALENCE, France

a Morphogenèse de l'appareil digestif. *(Anura)*

b Développement des glandes digestives. *(Anura)*

c Ultrastructure des cellules du tube digestif chez l'embryo et la larve. *(Anura)*

d Endoderme et dérivés. *Rana dalmatina, Bufo bufo (Anura)*

ALBRIGHT, J. F. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Ontogeny of the immune system. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with T. MAKINODAN)

b Differentiation of erythrocytic system during ontogeny. *Gallus gallus (Aves), Mus musculus (Rodentia)*

ALESCIO, T. M.D. — Ist. di Anat. Topogr., Univ. di Napoli, Via L. Armanni 5, NAPOLI, Italy

ALEXANDER, G. D.Agr.Sc. — Div. of Anim. Physiol., C.S.I.R.O., Ian Clunies Ross Anim. Res. Lab., Great Western Highway, (P.O.Box 144, Parramatta), PROSPECT, N.S.W. 2150, Australia

a Investigations of the physical and physiological relations between maternal and embryonic tissues. *Ovis* spec. *(Artiodactyla)*

ALEXANDRE, J.-H. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

ALEXANDRU (HORVAT), Mrs. C. Dr.med. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania

a Experimental teratology of the central nervous system. *Gallus domesticus (Aves)*

ALLÉAUME (BORDES), Mrs. N. Dr.Biol.anim. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France

a Recherches expérimentales sur la détermination des caractères larvaires et imaginaux. *Calliphora* spec., *Drosophila* spec. *(Diptera)*

ALLEN, E. R. — Dept. of Anat. and Cell Biol., School of Med., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.

a Fibrillogenesis of native collagen in the embryo. *Sus scrofa (Artiodactyla)*

b Immunochemical studies of actin and myosin synthesis in somites. *Gallus domesticus (Aves)*

c Morphological (ultrastructural) organization of contractile protein in myogenic tissue into functional sarcomeres. *Gallus domesticus (Aves), Sus scrofa (Artiodactyla)*

d Control of ribosomal synthesis in oocytes. *Acheta domesticus (Orthoptera)*

ALLEN, Miss M. J. † Ph.D., Prof. — Dept. of Biol., Wilson Coll., CHAMBERSBURG, Pa., U.S.A.
(deceased)

ALLEN, R. D. Ph.D. — Dept. of Biol. Sci., State Univ. of New York at Albany, ALBANY, N.Y. 12203, U.S.A.

a Investigations of cell division and motility of unicellular organisms and of tissue cells in vivo and in vitro. *(Sarcodina, Protista; Metazoa)*

ALLISON, J. E. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Oklahoma, 801 NE 13th St., OKLAHOMA-City, Okla. 73104, U.S.A.

a Studies on the genital and urinary anomalies with emphasis on hermaphroditic alterations. *Rattus rattus (Rodentia)*

ALLISTON, C. W. Ph.D., Prof. — Herrick Labs., Dept. of Anim. Sci., School of Agric., Purdue Univ., LAFAYETTE, Ind. 47907, U.S.A.

a In vitro culture temperatures and subsequent viability of ova. *Oryctolagus cuniculus (Lagomorpha)*

ALTMAN, J. Prof. — Dept. of Biol. Sci., Purdue Univ., LAFAYETTE, Ind. 47907, U.S.A.

a Development of the brain

ALVAREZ, L. Med.Dr. — Inst. F. Olóriz, Fac. of Med., Univ. of Granada, GRANADA, Spain

ALVES, M. A. R. Dr.phil. — Dept. of Biol., Fac. Filos. Ciênc. e Let. de Ribeirão Prêto U.S.P., Caixa Postal 759, RIBEIRÃO PRÊTO, S.P., Brazil

a Oogenesis. *Bradysia* spec. *(Diptera)*

AMADO, P. O. M.D. — Inst. de Histol. e Embriol., Fac. de Med., Av. Prof. Egas Moniz, LISBOA 4, Portugal

a Cytology, histochemistry and organotypical culture of the mesonephros. *Gallus domesticus (Aves)*

AMANO, H. D.Sc., Prof. — Biol. Lab., Doshisha Univ., Kamikyo-ku, Karasuma Imadegawa, KYOTO, Japan.

a Developmental mechanism of the heart. *Triturus pyrrhogaster (Urodela)*

b Developmental mechanism of the limb. *Triturus pyrrhogaster (Urodela)*

AMANUMA, A. D.Sc. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan

a Experimental analysis of gonadal differentiation. *Gallus domesticus (Aves)*

b Sex chromatin in embryonic tissues. *Mus musculus (Rodentia)*

AMONS, F. M.Sc. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands

a Development of pineal gland. *Gallus domesticus (Aves)*

b Influence of heavy metals on lymphosarcoma cell proliferation and behaviour in tissue culture. *Mus musculus (Rodentia)*

c Pineal body in tissue culture. *Gallus domesticus (Aves)*

AMOROSO, E. C. F.R.S., Prof. — Dept. of Physiol., Royal Vet. Coll., Univ. of London, Royal College St., LONDON N.W.1, England •

AMPRINO, R. M. M.D., Prof. — Inst. of Human Anat., Fac. of Med., Univ. of Bari, Policlinico, 70124 BARI, Italy •

a Relations between ectoderm and mesoderm in the morphogenesis of the wing. *Gallus domesticus (Aves)*

b Regulative capacities of the wing anlage. *Gallus domesticus (Aves)*

c Analysis of the twinning of limb buds. *Gallus domesticus (Aves)*

AMY, R. L. Ph.D., Prof. — Dept. of Biol., Southwestern at Memphis, MEMPHIS, Tenn. 38112, U.S.A.

a Ultraviolet microbeam studies on the developing embryo. *Habrobracon juglandis (= Bracon hebetor) (Hymenoptera)*

b Analysis of radiation-induced embryonic death. *Habrobracon juglandis (= Bracon hebetor) (Hymenoptera)*

ANAND KUMAR, T. C. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England

a Oogenesis. *(Lemuroidea, Primates)*

ANDERSEN, H. A. Ph.D. — Biol. Inst. of the Carlsberg Found., Tagensvej 16, 2200 COPENHAGEN N., Denmark

a Replication of DNA after synchronization of the cell division with heat shocks. *Tetrahymena pyriformis (Ciliata)*

ANDERSEN, O. F. B.A. — Physiol. Dept., Merck Inst. for Therap. Research, RAHWAY, N.J. 07065, U.S.A.

a Studies on the sperm acrosome reaction in relation to fertilization. *Mesocricetus auratus (Rodentia)*

ANDERSON, D. T. D.Sc. — School of Biol. Sci., Zool. Bldg., Univ. of Sydney, N.S.W. 2006, Australia

a Embryology. *Leptograpsus variegatus (Brachyura, Crustacea)*

ANDERSON, E. M. Prof. — Dept. of Zool., Univ. of Massachusetts, AMHERST, Mass. 01002, U.S.A. •

ANDERSON, J. E. M.D., Prof. — Dept. of Anat., Fac. of Med., McMaster Univ., HAMILTON, Ont., Canada

a Post-natal growth and development of bone. *Homo sapiens (Primates)*

ANDERSON, J. M. Ph.D., Prof. — Div. of Biol. Sci., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

ANDERSON, J. W. Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.

a Comparative histophysiology of placenta and fetal membranes, especially protein transfer. *Geomys bursarius, Rattus norvegicus (Rodentia), Eptesicus fuscus, Noctilio labialis (Chiroptera), Canis familiaris (Carnivora)*

b Development of brain proteins.

c Perinatal transfer of antibodies via placenta, fetal membranes, mammary gland, gut. *Rattus norvegicus (Rodentia)*

d Electrophoresis of fetal and maternal sera. *Canis familiaris (Carnivora), Castor canadensis (Rodentia), Odocoileus virginiana (Artiodactyla)*

ANDERSON, M. J. B.A. — Leland Stanford Jr. Univ., STANFORD, Calif. 94305, U.S.A.

a Microtubules during early cleavage: 1. assay of level of microtubular protein (tracer study). 2. are microtubules (i.e. spindles) synthesized or assembled? *Strongylocentrotus purpuratus (Echinoidea), Urechis caupo (Echiuroidea)*

ANDERSON, P. N. M.D. — Lab. of Biol., Natl. Canc. Inst., Natl. Inst. of Health, Bldg. 8, Rm B-18, BETHESDA, Md. 20014, U.S.A.

a Radioautographic analysis of DNA synthetic cycle during embryonic development of the ocular lens. *Gallus domesticus (Aves)*

b Immunochemical and histochemical analysis of plasma cell and immunoglobulin differentiation; in vitro induction of plasma cell immunoglobulin synthesis. *Mus musculus (Rodentia)*

ANDERSSON, T. Fil.mag. — Zool. Inst., Univ. of Gothenburg, 4de Långgatan 7B, GÖTEBORG SV, Sweden

ANDRES, G. Dr. — Zool. Inst. der Johannes Gutenberg Univ., Saarstr. 21, MAINZ, W.Germany

ANDREW, Miss A. Ph.D. — Dept. of Anat., Med. School, Univ. of the Witwatersrand, Hospital St., JOHANNESBURG, S.Africa

a Origin of enteric ganglia. *Gallus domesticus (Aves)*

b Autoradiographic study of the relation between histones and RNA synthesis in cultured neural crest cells. *Xenopus laevis (Anura)* (in collaboration with Mrs. V. GABIE, Dept. of Zool.)

ANGRA, S. K. M.S. — Dr. Rajendra Prasad Center for Ophthalm. Sci., All India Inst. of Med. Sci., NEW DELHI-16, India

a Lens regeneration after intracapsular and extracapsular lens extraction, with and without implantation of embryonal ocular tissue. *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with L. P. AGARWAL)

b Lens regeneration after extracapsular lens extraction and implantation with 20-methyl cholanthrene. *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with L. P. AGARWAL)

c Ocular embryonal tissue implants in the anterior chamber of the eye. *Oryctolagus cuniculus (Lagomorpha)* (in collaboration with L. P. AGARWAL)

d Biochemical assay of regenerates (amino acids and RNA, DNA). *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with L. P. AGARWAL)

e Regeneration of iris after iridectomies. *Oryctolagus cuniculus (Lagomorpha), Macacus rhesus (Primates)* (in collaboration with L. P. AGARWAL)

ANTEUNIS, Miss A. H. J. D.Sc. — Lab. of Anat., Fac. of Med., Univ. of Gent, Ledeganckstr. 35, GENT, Belgium

ANTON, H. J. Dr.phil., Doz. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany

a Proteinstoffwechsel bei Regenerationsprozessen. *(Amphibia)*

AOTO, T. D.Sc., Prof. — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 10, West 8, SAPPORO, (060) Japan

a Morphological and physiological studies on neurosecretion. *(Crustacea; Pisces; Amphibia)*

b Sex differentiation and gonadal development. *(Amphibia)*

c Regeneration and cytodifferentiation. *Hydra magnipapillata (Hydroidea), Xenopus laevis (Anura)*

d Morphogenesis of the nauplius-eye. *Palaemon paucidens (Decapoda, Crustacea)*

e Morphogenesis of the pineal organ. *Xenopus laevis (Anura)*

APEKIN, V. S. — Azov-Black Sea Research Inst. of Marine Fishery Management and Oceanogr., KERCH, Crimean region, U.S.S.R.

a Immunological study of maturation processes in oocytes, and of early embryogenesis. *Acipenser stellatus, A. güldenstädti colchicus (Chondrostei)*

b Experimental and immunological study of maturation processes. *Gobius melanostomus, G. batrachocephalus (Teleostei)*

ARCAN (STELEA), Mrs. A. Dr.med. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania

a The influence of cytostatics on embryonic and foetal development. *Gallus domesticus (Aves)*

b The dependence of prenatal morphogenesis on the integrity of the spinal cord. *Gallus domesticus (Aves)*

ARGYRIS (FRANKENHUIS), Mrs. B. Ph.D., Prof. — Dept. Urol., Upstate Med. Center, State Univ. of New York, SYRACUSE, N.Y. 13210, U.S.A.

a Maturation of immunological capacity; comparative study. 1. Immunological tolerance. 2. Role of a macrophages in antibody synthesis and immunological maturation. *Mus musculus (Rodentia)*

ARGYRIS, Th. S. Ph.D., Prof. — Dept. of Zool., Syracuse Univ., 130 College Place, SYRACUSE, N.Y. 13210, U.S.A.

a Regeneration and the control of growth of adult organs. 1. Mechanism of hair growth stimulation in wound healing. 2. Mechanism of cellular proliferation produced by damage in adult liver and kidney. *(Mammalia)*

b Functional hypertrophy and the control of growth of adult organs. 1. Mechanism of kidney growth following unilateral nephrectomy. 2. Role of plasma proteins in liver growth. *(Mammalia)*

c Stimulation of adult organs and tissues by tumors; growth promoting effects of Ehrlich ascites tumor, S-180, on skin, mammary gland, liver and kidney. *(Mammalia)*

d Induction of drug metabolizing enzymes and liver growth by phenobarbital and 3-methylcholanthrene. *Mus musculus, Rattus norvegicus (Rodentia)*

ARIËNS KAPPERS, J. M.D., Prof. — The Netherlands Central Inst. for Brain Research, IJdijk 28, AMSTERDAM-O., Netherlands •

ARIMA, Sh. D.Agr., Prof. — Lab. of Anim. Morphol., Biol. Inst., Fac. of Sci., Nara Women's Univ., Kitauoya-Nishi-machi, NARA, Japan

a Studies on the end-products of metabolism in the embryo and the tadpole. *Rhacophorus schlegelii* var. *arborea (Anura)*

b Effects of mammalian prolactin on the growth and the nitrogenous excretion of tadpoles. *Rhacophorus schlegelii* var. *arborea (Anura)*

ARMS, Miss K. Ph.D. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif. 94305, U.S.A.

ARMSTRONG, P. B. M.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE, N.Y. 13210, U.S.A.

a Behavioral responses in developing embryos. *Amiurus nebulosus (Teleostei), Ambystoma punctatum (Urodela)*

ARMSTRONG, Miss R. C. Ph.D. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.

a Early development of the mammary gland with special reference to tissue interaction and DNA synthesis using culture methods and H^3 thymidine labeling. *Mus musculus (Rodentia)*

b Lens development, with special reference to cell division and lens fibre differentiation. *Rattus rattus (Rodentia)*

ARNAULD, Miss E. L. Dr.Biol.Anim. — Lab. de Biol. Anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, 33 TALENCE, France

a Etude expérimentale du développement du mésonéphros. *Rana* spec., *Discoglossus* spec., *Bufo* spec. *(Anura)*

b Etude expérimentale de la métamorphose du rein. *Rana* spec., *Discoglossus* spec., *Bufo* spec. *(Anura)*

ARNDT, E. A. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Abt. Meeresbiol., Universitätsplatz 2, ROSTOCK, East.Germany

ARNOLD, J. M. Ph.D., Prof. — Pacific Biomed. Research Centre, Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.

a Studies on the egg cortex (histochemical techniques, electron microscopy and centrifugation). *Loligo pealii (Decapoda), Octopus* spec. *(Octopoda, Mollusca)*

b Studies on the developmental fine structure of the eye-lens. *Loligo pealii (Decapoda), Octopus* spec. *(Octopoda, Mollusca)*

c Studies on the formation of the blastoderm and cleavage. *(Cephalopoda, Mollusca)*

ARNOLD, Miss J. M. M.Sc. — Zool. Dept., Univ. of W.Australia, NEDLANDS, W. Australia 6009, Australia

a Development of homeostatic mechanisms associated with respiration and energy metabolism. *Dasyurus geoffroyi (Marsupialia)*

ARNOLDS, W. J. A. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a Investigation of albumen uptake in embryos by means of immunofluorescent tracing of albumen proteins. *Limnaea stagnalis (Gastropoda)*

ARORA, H. L. Ph.D. — address unknown •

ARRU, Miss A. Dr. — Ist. di Zool., Fac. di S.M.F.N., Univ. di Sassari, Via Murroni 25, 07100 SASSARI, Italy

a Gonadogenesis. *Crenilabrus* spec. *(Labridae), Syngnathus* spec. *(Syngnathiformes, Teleostei)*

ARTHUR, Miss E. M.Sc. — School of Biol. Sci., Univ. of East Anglia, Wilberforce Rd., NORWICH, NOR 88C, England

a Neoplasms particularly lymphosarcomas. *Xenopus laevis (Anura)*

b Control of cell division. *Xenopus laevis (Anura)*

ASAKURA, K. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan

a Development and regeneration of scales. *Oryzias latipes, Carassius auratus* and other spp. *(Teleostei)*

ASAMI, K. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan

a Biochemical research on the hormonal control of placental growth. *Rattus norvegicus (Rodentia)*

b Changes in egg energy metabolism at fertilization. *Anthocidaris crassipina, Hemicentrotus pulcherrimus (Echinoidea)*

ASAYAMA, S. Prof. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan

a Study on gonad differentiation. *Homo sapiens (Primates)*

b Experimental analysis of gonadal sex. *Gallus domesticus (Aves)*

ASHBY, K. R. Ph.D. — Dept. of Zool., Univ. of Durham, South Rd., DURHAM, England

a The development of the reproductive system, and the modifications induced by treatment with steroid hormones during the course of sexual differentiation. *Salmo irideus, S. trutta (Teleostei)*

ASHHURST, Miss D. E. D.Phil. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England

a Development of connective tissue in the pupa: site of polymerization of collagen molecules (using labelled proline). *Galleria mellonella (Lepidoptera)*

ASHLEY, G. T. M.D. — Dept. of Anat., Univ. of Manchester, MANCHESTER 13, England

ASLING, C. W. M.D., Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.

a Development of face and palate, and congenital defects resulting from maternal pteroylglutamic acid deficiency. *Rattus* spec. *(Rodentia)*

b Development of inner ear, and congenital defects resulting from maternal manganese deficiency. *Rattus* spec. *(Rodentia)*

c Autoradiographic studies on abnormal development in the embryo, with special reference to the neural tube. *Rattus* spec. *(Rodentia)*

ASNANI, Miss M. M.Sc. — Dept. of Zool., Fac. of Sci., Univ. of Baroda, BARODA-2, India

a Liver, spleen and lymph gland regeneration. *(Reptilia; Aves)*

ASSENMACHER, I. A. Dr.Méd., Dr. Sci., Prof. — Lab. de Physiol. Anim., Fac. des Sci., Univ. de Montpellier, Place Eugène Bataillon, 34 MONTPELLIER, France

ASTAHOVA (DJAKONOVA), Mrs. I. N. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

ASTAUROV, B. L. Dr.biol.sci., Prof. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilow St. 26, MOSCOW B-133, U.S.S.R. •

a Artificial parthenogenesis and experimental polyploidy. *Bombyx mori (Lepidoptera)*

b Induction of amphidiploidy in interspecific hybrids. *Bombyx mori, B. mandarina (Lepidoptera)* (in collaboration with Miss V. N. VEREISKAYA).

c Genetic control of egg cell reactivity to the stimuli activating artificial parthenogenesis. *Bombyx mori (Lepidoptera)*

AUCLAIR, W. Ph.D., Prof. — Dept. of Biol., Rensselaer Polytechn. Inst., TROY, N.Y. 12181, U.S.A.

a Macromolecular protein synthesis and associated morphogenesis of cilia during the blastula stage. *Arbacia punctulata, Strongylocentrotus purpuratus (Echinoidea), Chaetopterus pergamentaceus (Annelida)*

b Macromolecular synthesis during regeneration of cilia in gastrulae. *Arbacia punctulata, Strongylocentrotus purpuratus (Echinoidea), Chaetopterus pergamentaceus (Annelida)*

AUERBACH, R. Ph.D. — Dept. of Zool., Univ. of Wisconsin, 1117 West Johnson St., MADISON, Wis. 53706, U.S.A.

AUERSPERG, N. M.D., Ph.D., Prof. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Interaction of cellular and environmental factors in tumor histogenesis in vitro. *Homo sapiens (Primates)*

AUGSTEN, H. Dr.habil., Prof. — Sekt. Biol. - Pflanzenphysiol., Friedrich-Schiller Univ., von-Hase-Weg 3, 69 JENA, East.Germany

a The relationship between metabolism and development. *Ficaria verna (Ranunculaceae), (Gramineae)*

b Some problems of metabolism (enzyme activities) during germination. *Pisum sativum (Papilionaceae)*

AUROUX, M. Dr.en Méd. — Lab. d'Histol.-Embryol. A, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France

a Développement normal et anormal de l'encéphale. *Mus rattus (Rodentia), Homo sapiens (Primates)*

b Perturbations tardives du système nerveux central compatibles avec la vie (baisse de la capacité d'apprentissage). *Rattus norvegicus (Rodentia)*

AUSTIN, C. R. D.Sc. — Physiol. Lab., Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3EG, England •

a Investigations on gametes, fertilization and early development. *(Polychaeta; Mollusca; Echinodermata; Reptilia; Mammalia)*

b Induced and spontaneous anomalies of development. *(Mammalia)*

AVE, K. D.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812, Japan

a Heterogeneous cell composition of germ layers. *(Amphibia)*

b Sialic acid distribution on the cell surface. *Gallus domesticus (Aves)*

AVEL, M. Dr., Prof. — Lab. de Biol. Génér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France •

AVERKINA, Mrs. R. F. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

AVRAMOVIČ (ČERMELJ), Mrs. N. B.Sc. — Inst. of Nucl. Sci. "Boris Kidrich", BELGRADE, Yugoslavia

AWATTA, E. M.Sc. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
a Analysis of the testis specific antigens. *Cavia cobaya, Mus musculus (Rodentia)*
AX, P. Dr., Prof. — II. Zool. Inst. und Museum, Berlinerstr. 28, GÖTTINGEN, W. Germany
AXELROD, L. R. Ph.D. — Div. of Biol. Growth and Developm., Southwest Found. for Research and Educ., P.O.Box 28147, SAN ANTONIO, Tex. 78228, U.S.A.
a Steroid metabolism in the fetus. *Homo sapiens, Papio* spec. *(Primates)*
AYKAÇ, I. D.V.M. — Inst. of Histol. and Embryol., Med. Fac., Atatürk Univ., ERZURUM, Turkey
AZOUBEL, R. M.D., Ph.D. — Dept. de Morfol. Humana Functional e Aplicada, Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, RIBEIRÃO PRÊTO, S.P., Brazil
a Histochemistry of developing neurons. *(Vertebrata)* (in collaboration with A. R. CRUZ),
b Allometric growth of the eye in hemispherectomized animals. *Rattus rattus (Rodentia)* (in collaboration with A. R. CRUZ and S. IUCIF)
c Effect of hemispherectomy on the thyroid gland. *Rattus rattus (Rodentia)* (in collaboration with A. R. CRUZ and S. IUCIF)
d Effect of hypervitaminosis A on the fetus. *Rattus rattus (Rodentia)*
BABA, S. D.Sc. — Dept. of Botany, Fac. of Sci., Kyoto Univ., KYOTO, Japan
a Experimental induction of wound vessel member differentiation. *Coleus blumei (Labiatae)* (in collaboration with L. W. ROBERTS, Moscow, Idaho, U.S.A.)
BABAYEVA, Mrs. A. G. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-135, U.S.S.R.
BACCARINI, Miss I. M.D. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4°andar, C.P. 253, BELO HORIZONTE, M.G., Brazil
a Study of the nuclear size and DNA content (cytophotometry) of different organs in embryo and larva. *Ascidia nigra (Ascidiae)*
b Study of the DNA synthesis with autoradiography and cytophotometry of endometrium, myometrium and placenta. *Mus musculus (Rodentia)*
BACKHOUSE, K. M. M.B., B.S. — Dept. of Anat., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C.2, England
a Gubernaculum testis and testicular descent. *(Mammalia)*
b Early embryology and implantation. *Halichoerus grypus (Pinnipedia)*
BÄCKSTRÖM, S. A. A. Fil.Dr. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden
a Basic proteins during oogenesis and early development (biochemical, histochemical and autoradiographic methods). *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*
BADE, E. G. M.D. — Inst. de Patol. Gener. y Exper., Fac. de Ciencias Med., Univ. Nac. de Cuyo, Casilla de Correo 513, MENDOZA, Argentina
BADÍNEZ, O. M.D., Prof. — Cát. de Embriol., Escuela de Med., Univ. de Chile, Zañartu 1042, SANTIAGO, Chile
BAEVSKY, J. B. Cand.biol.sci. — Inst. of Anim. Evolut. Morphol. and Ecol., Acad. of Sci. of the USSR, Lenin Avenue 33, MOSCOW W-71, U.S.S.R.
a Retardation of embryo development and state of maternal endocrine glands during embryonic diapause. *Talpa altaica (Insectivora), Martes zibellina, Mustela vison (Carnivora), Rattus norvegicus, Mus musculus (Rodentia)*
BAFFONI, G. M. Dr.Biol.Sci., Prof. — Ist. di Anat. Comp., Univ. di Modena, Via Berengario 14, 41100 MODENA, Italy
a Growth and differentiation of the nervous cell. *(Cyclostomata; Teleostei; Amphibia; Aves; Mammalia)*
b Localisation of mitoses in the central nervous system: numerical variations of ventricular and extraventricular mitoses in the normal development, regenerating nervous tissue and in thyroxinated tadpoles. *Xenopus* spec., *Bufo* spec. *(Anura), Triturus* spec. *(Urodela)*
c Regeneration of the nervous system in postmetamorphic animals. *(Teleostei; Anura)*
d Regeneration of nerve fibres during larval life. *(Urodela)*
e Differentiation of epidermal and intestinal epithelia. *(Annelida, Crustacea)*
BAGIŃSKA (BORSUK), Mrs. I. M.D. — Inst. of Pathol. Anat., Milit. Acad. of Med., Plac 9 Maja, ŁÓDŹ, Poland
BAGIŃSKI, S. M.D., Prof. (Emer.) — Narutowicza 94-9, ŁÓDŹ, Poland
a Teratogenesis and developmental pathology. *Homo sapiens (Primates)*
b Development of nervous system (microcinematography). *Gallus domesticus (Aves)*
BAGLIONI, C. M.D., Prof. — Dept. of Biol., Massachusetts Inst. of Technol., CAMBRIDGE, Mass. 02139, U.S.A. •
BAGNARA, J. T. Ph.D., Prof. — Dept. of Biol. Sci., Univ. of Arizona, TUCSON, Arizona 85721, U.S.A. •
a Various aspects of the development and endocrinology of pigmentation. Many spp. *(Amphibia)*
b Ultrastructure of chromatophores. Many spp. *(Amphibia)*

c Developmental physiology of xanthophores, erythrophores, and iridophores. Many spp. *(Amphibia)*

BAIRATI, A. — Ist. di Genet., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy

a Electron microscopy of tissues. *Drosophila* spec. *(Diptera)*

BAKER, J. R. Ph.D. — Dept. of Zool. and Entomol., Iowa State Univ., AMES, Iowa 50010, U.S.A.

a Incorporation and transport of labeled metabolites by early stage blastoderms in vitro. *Gallus domesticus (Galliformes), Pygoscelis adelie (Spheniscidae, Aves)*

b Incubation physiology and growth rate studies of early embryonic stages. *Pygoscelis adelie (Spheniscidae, Aves)*

BAKER, Mrs. P. C. Ph.D. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.

a The ultrastructural morphology and histochemistry of cells undergoing morphogenetic movement. *Hyla regilla, Rana pipiens, Xenopus laevis (Anura)*

b The ultrastructure of wound healing. *Hyla regilla, Rana pipiens, Xenopus laevis (Anura)*

c The ultrastructural morphology of the gastrula and neurula stages. *Hyla regilla, Rana pipiens, Xenopus laevis (Anura)*

BAKER, R. F. Ph.D. — Dept. of Biol. Sci., Univ. of Southern California, University Park, LOS ANGELES, Calif. 90007, U.S.A.

a Developmental genetics and regulation of macromolecular synthesis *(Echinoidea)*

BAKER, T. G. Ph.D. — Hormone Lab., Dept. of Obstet. and Gynaecol., Univ. of Edinburgh, Chalmers St., EDINBURGH 3, Scotland, U.K.

a Oogenesis. *(Primates)*

b The effects of X-rays on female germ cells. *(Rodentia; Primates)*

c The fine structure and metabolic activity of oogonia and oocytes. *(Rodentia; Primates)*

d Cytological and endocrine studies of ovulation, fertilization and early development in vitro. *Rattus norvegicus, Mus musculus (Rodentia), Homo sapiens* and other *Primates*

e The structure and hormonal control of the placenta maintained in organ culture. *Homo sapiens (Primates)*

BAKER, W. K. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Genetic studies on differentiation processes. *Drosophila* spec. *(Diptera)*

BAL, A. K. D.Phil. — Dept. des Sci. Biol., Univ. de Montréal, Case Postale 6128, MONTRÉAL, Que., Canada

a Changes in the membrane system of cells during differentiation (root meristem). *Allium cepa (Liliaceae)*

b Changes in the membrane system during oogenesis. *Arbacia punctulata (Echinoidea)*

c Autoradiographic study of nucleic acid synthesis during oogenesis *Arbacia punctulata (Echinoidea)*

BALINSKY, B. I. Dr.Biol.Sci., Prof. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, S.Africa •

a An electron microscopic study of early development. (lower *Vertebrata*)

BALLARD, W. W. Ph.D., Prof. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H. 03755, U.S.A.

a Morphogenetic movements in embryos. *(Teleostei)*

b Monograph on developmental anatomy. *Ambystoma* spec. *(Urodela)*

BALLS, M. D.Phil. — School of Biol. Sci., Univ. of East Anglia, Wilberforce Rd., NORWICH, NOR 88C, England

a Neoplasms particularly lymphosarcomas. *Xenopus laevis (Anura)*

b Nuclear-cytoplasmic interaction in early development. *Xenopus laevis (Anura,*

c Control of cell division. *Xenopus laevis (Anura)*

BALON, E. K. Ph.D. — Lab. of Fish. Research, Železná Studienka 806, BRATISLAVA, Czechoslovakia
— temporarily up to 1971: Centr. Fish. Research Inst. (UNDP-FAO), P.O.Box 100, CHILANGA, Zambia

a Embryology and life cycle. *Cyprinus carpio (Cyprinidae), Hydrocynus vittatus, Alestes* spec. *(Characidae, Teleostei)*

b Studies on development. *Tilapia* spec. *(Cichlidae; Mormyridae, Teleostei)*

BALTUS, Mis E. J. D.Sc. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium

a Studies on DNA synthesis during oogenesis. *(Amphibia)*

b Evolution of cytoplasmic DNA during embryonic development. *(Amphibia)*

BALTZER, F. Dr., Prof. (Emer.) — Zool. Inst., Univ. Bern, Sahlistr. 8, 3000 BERN, Switzerland •

BAND, R. N. Ph.D., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.

a Mechanism of cell-to-cell adhesion. *Acanthamoeba (= Mayorella) palestinensis (Rhizopoda*

b Cytokinesis studies; the induction of division in uninucleate cells without mitosis, leading to enucleate and nucleate daughter cells.

BANERJEE, B. Ph.D. — Dept. of Entomol., Tea Research Assoc., Tocklai Exper. Station, JORHAT 8, Assam, India

a Reproductive physiology and histochemical distribution of phosphatases. *Odontotermes redemanni (Termitidae, Isoptera)*

b Caste development. *Odontotermes redemanni (Termitidae, Isoptera)*

BANKS, B. Dr. — Dept. of Chem., Univ. Coll. London, Gower St., LONDON W.C.1, England

BANTHORPE, D. V. Dr. — Dept. of Chem., Univ. Coll. London, Gower St., LONDON W.C. 1, England

BAPAT, Miss S. M.Sc. — Dept. of Zool., Shivaji Univ., Vidyanagar, KOLHAPUR-4, Maharashtra State, India

BARABANOV, V. M. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

BARASA, A. — Ist. di Anat. degli Anim. Domestici, Univ. di Torino, Via Nizza 52, 10126 TORINO, Italy

a Morphogenetic processes of the wing following removal of some parts. *Gallus domesticus (Aves)*

b Mitochondria and lipochondria in cells cultured in vitro in various experimental conditions. *Gallus domesticus (Aves)*

c Origin of binucleate cells in cultures. *(Aves)*

d Effect of subnormal temperatures on mitosis of cells cultured in vitro. *(Aves)*

e Mitoses of binucleate cells. *(Aves)*

BARBAGALLO (PATTI), Mrs. J. Dr. — Ist. di Zool., Univ. di Catania, Via Androne 81, 95124 CATANIA, Italy

a Physiological and experimental embryology of the earliest developmental stages. *Porcellio laevis (Isopoda)*

BARBIERI, F. D. Dr.Biochem., Prof. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina

a Chemical factors involved in fertilization: jelly coats and diffusible factor. *Bufo arenarum (Anura)*

BARBOSA AYUCAR, E. Dr.en Med. — Serv. de Embriol. Exper., Cat. de Anat., Fac. de Med., VALLADOLID, Spain

a Effect of puromycin on morphogenesis. *Gallus domesticus (Aves)*

BARCH, Mrs. S. H. Ph.D. — Zool. Dept., Biol. Research Center, Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.

BARIGOZZI, C. Dr.Sci., Prof. — Ist. di Genet., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy •

a DNA replication in cells cultured in vitro. *Drosophila melanogaster (Diptera)*

BARNARD, P. B. T. Fil.Lic. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden

a Ultrastructural and chemical differentiation of brown adipose tissue in pre- and neonatal animals, especially mitochondrial changes. *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

BARR, Miss G. B.Sc. — Dept. of Zool., The Univ., GLASGOW W.2, Scotland, U.K.

BARSACCHI, Miss G. Dr.Biol.Sci. — Ist. di Zool. e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy

a Lampbrush chromosomes. *(Urodela)*

BART, A. — Lab. de Zool., Fac. des Sci., B.P. 36, 59 LILLE-Distribution, France

a Morphogenesis and regeneration. *Carausius morosus (Phasmidoptera)*

BARTELMEZ, G. W. † Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A. (deceased)

BARTH, L. G. Ph.D., Prof. — Marine Biol. Lab., Box 27, WOODS HOLE, Mass. 02543, U.S.A. •

a The sodium dependence of embryonic induction. *Rana pipiens (Anura)*

BARTH, Mrs. L. J. Ph.D. — Marine Biol. Lab., Box 27, WOODS HOLE, Mass. 02543, U.S.A. •

a The sodium dependence of embryonic induction. *Rana pipiens (Anura)*

b Nature of the hybrid block to development. *Rana pipiens* x *R. sylvatica (Anura)*

BARTH, R. H., Jr. Ph.D. — Dept. of Zool., The Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.

a Physiology of reproduction: role of corpora allata and neurosecretory system in control of reproductive behavior and physiology, and regulation of the reproductive cycle of the female. *Byrsotria fumigata, Leucophaea maderae, Nauphoeta cinerea* and other spp. *(Dictyoptera)*

b Effect of insect hormones on RNA metabolism during pupal diapause and adult development. *Antherea pernyi, Hyalophora cecropia* and other spp. *(Saturniidae, Lepidoptera)*

BARTKE, A. Ph.D. — Worcester Found. for Exper. Biol., 222 Maple Ave., SHREWSBURY, Mass. 01545, U.S.A.

a Hormonal control of spermatogenesis; effects and mechanism of action of prolactin. (Quantitative histological analysis of seminiferous epithelium and biochemical measurements of Leydig cell activity). *Mus musculus (Rodentia)*

BARTONE, J. C. Ph.D. — Dept. of Anat., Coll. of Med., Howard Univ., WASHINGTON, D.C., U.S.A.

BARTOŠ, F. RNDr., C.Sc., Prof. — Dept. of Biol., Med. Fac., Charles Univ., Šimkova 870, HRADEC KRÁLOVÉ, Czechoslovakia

a Cytology of granulation tissue. *Rattus norvegicus, Mus musculus (Rodentia)*

b Regeneration of bone and cartilage. *Canis familiaris (Carnivora)*

c Developmental biology of ligamentum nuchae (cells, collagen and elastin). *Bos taurus (Artiodactyla)*

BARUA, D. N. Ph.D. — Bot. Branch, Tea Research Assoc., Tocklai Exper. Station, CINNAMARA, P.O., Assam, India

BATEMAN, A. J. Ph.D., D.Sc. — Cytogenet. Dept., Paterson Labs., Christie Hosp. and Holt Radium Inst., Wilmslow Rd., MANCHESTER 20, England

a The development of embryos with genotypes which are lethal because of aneuploidy or partial aneuploidy (progeny of translocation heterozygotes). *Mus musculus (Rodentia)*

b Development of testis with special reference to Sertoli cells. *Mus musculus (Rodentia)*

c Effect of X-rays on immature testis. *Mus musculus (Rodentia)*

BATTLE, Miss H. I. Ph.D., Prof. — Dept. of Zool., Coll. of Sci., Univ. of Western Ontario, LONDON, Ont., Canada

a Effects of chloramphenicol on early developmental processes. *(Teleostei)*

b Comparative effects of selective inhibitors of amino acid, protein and RNA synthesis on early developmental processes. *(Teleostei)*

BAUME, L. J. D.M.D., Prof. — Inst. de Méd. Dentaire, 30 Rue Lombard, 1200 GENÈVE, Switzerland

BAUTZ (PORTMANN), Mrs. A. M. Lic.ès Sc. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Catherine, 54 NANCY, France

a Effet des rayons X sur la régénération. *Nereis diversicolor (Polychaeta errantia)*

BAVEJA, Miss R. M.S. — Dept. of Anat., Motilal Nehru Med. Coll., ALLAHABAD-1, India

a Role of endometrium and extraplacental membranes in the fetomaternal exchange process, histochemical and cytochemical methods. *Homo sapiens (Primates)* (in collaboration with H. C. VARMA)

BAXTER (GRILLO), Mrs. D. L. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria

BAXTER, E. W. Ph.D. — Biol. Dept., Guy's Hosp. Med. School, LONDON S.E.1, England

a Biology, including development and metamorphosis. *Petromyzon* spec. *(Cyclostomata)*

b Food changes during larval period of growth. *Ammocoetes (Cyclostomata)*

c Uptake and fate of "Thorotrast". *Ammocoetes (Cyclostomata)*

BEAMS, H. W. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a Synthesis and deposition of yolk.

b Embryology of blood

BEARN, J. G. B.S. — Anat. Dept., Middlesex Hosp. Med. School, LONDON W.1, England

BEATTY, R. A. Ph.D. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K.

a Breeding of genetically tagged strains for use in developmental biology. *Oryctolagus cuniculus (Lagomorpha)*

b Developmental biology and genestics of gametes. *Drosophila* spp. *(Diptera), Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

BEAUDOIN, A. R. — Dept. of Anat., Med. School, Univ. of Michigan, East Med. Bldg., ANN ARBOR, Mich. 48104, U.S.A.

BEAUMONT, A. Dr.ès Sci., Prof. — Lab. d'Anat. comp., Fac. des Sci. d'Orsay, Univ. de Paris, Bâtiment 441, 91-ORSAY, France

a Evolution du pancréas larvaire au cours de la métamorphose (microscopie électronique). *Discoglossus pictus, Alytes obstetricans (Anura)*

BEAUMONT, Miss H. M. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England

a Effects of irradiation on male and female germ cells, judged by changes in population of cells in the gonads and the capacity of gametes to produce viable embryos. *Rattus norvegicus (Rodentia)*

b Definition of factors influencing the radiosensitivity of germ cells (e.g. metabolic activity, changes in the hormonal environment). *Rattus norvegicus (Rodentia)*

BEAUPAIN (CREPY), Mrs. D. Dr.ès Sci. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49 bis Av. de la Belle Gabrielle, 94 NOGENT-sur-MARNE, France

a Caractérisation des substances morphogènes qui interviennent au cours du développement embryonnaire du poumon. *Gallus gallus (Aves)*
b Caractérisation des substances inhibitrices de la régénération du pharynx. *(Turbellaria)*

BEBBINGTON, A. M.Sc., M.I.Biol. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England
a Development. *(Aplysiidae, Opisthobranchia, Gastropoda)*
b Development. *(Aplacophora, Amphineura)*

BECK, F. M.D., Ch.B. — Dept. of Anat., The London Hosp. Med. Coll., Turner St., Whitechapel, LONDON E.1, England •
a The effect of trypan blue on development. *(Mammalia)*
b Embryonic nutrition. *(Mammalia)*
c The postnatal maturation of intestinal epithelium. *(Mammalia)*

BECKER, H. J. Ph.D., Prof. — Zool. Inst. der Univ. München, Luisenstr. 14, 8 MÜNCHEN 2, W.Germany •

BECUŞ (LAURENTIU), Mrs. M. M.D. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str.Gh. Marinescu 38, TÎRGU-MUREŞ, Romania

BEERMANN, W. Dr.rer.nat., Prof. — Max Planck Inst. für Biol., Abt. Beermann, Spemannstr. 34, 74 TÜBINGEN, W. Germany •
a Puffing and differentiation of chromosomes in salivary glands. *Chironomus tentans (Diptera)*

BEETSCHEN, J. C. Dr.ès Sci., Prof. — Lab. de Biol. Génér., Fac. des Sci., 118 Route de Narbonne, 31 TOULOUSE (04), France •
a Recherches cytologiques, embryologiques et génétiques sur l'hétéroploidie expérimentale. *(Amphibia)*
b Etude d'un facteur récessif semi-létal, ac. *Pleurodeles waltlii (Urodela)* (en collaboration avec A. JAYLET)
c Etude expérimentale de la différenciation des cellules embryonnaires en culture in vitro. *(Urodela)* (en collaboration avec Mme A. M. DUPRAT)

BEGLEY, D. B.Sc. — Dept. of Zool., Univ. of Nottingham, NOTTINGHAM, England
a Postnatal antibody absorption. *Rattus norvegicus (Rodentia)*
b Electron microscope studies of the differentiating intestine. *(Mammalia)*

BEHRMAN, S. J. M.D., Prof. — Dept. of Obstet. and Gynecol., Center for Research in Reprod. Biol., Univ. of Michigan Med. Center, ANN ARBOR, Mich. 48104, U.S.A.
a Antigenicity of the trophoblast. *Oryctolagus cuniculus (Lagomorpha), Mus musculus (Rodentia), (Primates)*
b Sperm antibodies.

BEINBRECH, G. Dr. — Inst. für Zellphysiol., Abt. für Biol., Ruhr-Univ., Postfach 2148, D-463 BOCHUM, W.Germany
a Development of muscles during metamorphosis: formation of the myofibrils and of the sarcotubular system. *Phormia regina (Diptera)*

BELKA (GRZYBEK), Mrs. A. Ph.D. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
a Histochemical studies of adrenal cortex in regeneration and compensation processes. *(Rodentia)*

BELL, E. Ph.D., Prof. — Dept. of Biol., Massachusetts Inst. of Technol., CAMBRIDGE, Mass. 02139, U.S.A. •

BELL, L. G. E. Ph.D. — Dept. of Zool., Univ. of Southampton, SOUTHAMPTON SO9 5NH, England
a Membrane mediated control of cell behaviour especially movement. *Amoeba proteus (Rhizopoda)*
b The changing relationship between nucleus and cytoplasm during the cell cycle. *Amoeba proteus (Rhizopoda)*

BELLAIRS, A. d'A. D.Sc. — Dept. of Anat., St. Mary's Hosp. Med. School, Paddington, LONDON W.2, England
a Morphogenesis of skeleton. *(Reptilia; Aves; Mammalia)*
b Embryonic membranes. *(Reptilia)*
c Regeneration. *(Reptilia)*

BELLAIRS, Mrs. M. R. Ph.D. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England •
a An electron microscopical and histochemical analysis of yolk formation. *Gallus domesticus (Aves)* (in collaboration with Mrs. M. A. England)
b Cell migration within the embryo. *Gallus domesticus (Aves)* (in collaboration with Mrs. J. E. M. HEAYSMAN, Dept. of Zool.)

BELLINI (CARDELLINI), Miss L. Ph.D. — Ist. di Zool. e Anat. Comp., Fac. di Sci., Univ. degli Studi, Piazza F. Marchetti, CAMERINO, Italy

BELLONI, C. Dott.Sci.biol. — Ist. di Zool. Gener., Fac. di Sci. Agraria, Univ. di Perugia, S. Pietro, PERUGIA, Italy

BELLWARE, F. T. B.Sc. — Dept. of Zool., Coll. of Sci., Univ. of Western Ontario, LONDON, Ont., Canada

a The developmental role of ribonucleic acid synthesis in early embryogenesis examined with the aid of actinomycin D. *(Teleostei)*

BELOUSSOV, L. V. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

BELSARE, D. K. Ph.D. — Post-Graduate Dept. of Zool., Univ. of Nagpur, NAGPUR, India

BENAZZI (LENTATI), Mrs. G. Prof. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italy

a Chromosome cycles in amphigonic and pseudogamous biotypes; determinism of pseudogamy and polyploidy. *(Tricladidea, Turbellaria)*

BENAZZI, M. Prof. — Ist. di Zool e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy •

a Asexual reproduction, pseudogamy, polyploidy and heredity. *(Tricladidea, Turbellaria)*

BENDER, H. A. Ph.D., Prof. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind. 46556, U.S.A.

a Phenogenetic studies of the ovarian tissue of female-sterile mutants. *Drosophila melanogaster (Diptera)*

b Physiological genetics. *Drosophila melanogaster (Diptera)*

c Genetics. *Coelopa frigida (Diptera)*

BENIRSCHKE, K. M.D., Prof. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

a Study of fetal adrenal development. *Dasypus novemcinctus (Edentata), Oedipomidas oedipus (Primates)*

b Chromosome studies. *Dasypus novemcinctus (Edentata)*

c Study of placentation, fetal development and drug toxicity on the embryo. *Dasypus novemcinctus (Edentata)*

d Comparative chromosome studies. *(Equidae, Perissodactyla; Camelidae, Artiodactyla)*

BENNETT, Mrs. D. Dr. — Dept. of Anat., Med. Coll., Cornell Univ., 1300 York Ave., NEW YORK, N.Y. 10021, U.S.A.

BENOIT, J. A. A. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France •

a Etude in vitro de l'embryon. *Mus musculus (Rodentia)*

b Etude expérimentale in vitro de la gastrula. *Mus musculus (Rodentia)*

BEN-OR (MILSTEIN), Mrs. S. Ph.D. — Dept. of Physiol., Hadassah Med. School, P.O. Box 1172, JERUSALEM, Israel

BENZIE, Miss V. L. Dr.phil. — Dept. of Zool., Univ. of Canterbury, Priv. Bag, CHRISTCHURCH, New Zealand

a Descriptive embryology. *Galaxias* spp. *(Galaxiidae, Teleostei)*

BER, A. M.D., M.V.D., Prof. — Endocrinol. Unit of the Rogoff Med. Res. Inst., Beilinson Hosp., PETAH-TIKVA, Israel

a Development of eye reaction to vitamin B1, *Hyla* spec., *Bufo* spec., *Pylobates* spec. *(Anura)*

BERDYSHEVA, L. V. Cand.biol.sci. — Lab. of Physiol., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

BEREITER-HAHN, J. Dr.phil.nat. — Inst. für Kinemat. Zellforsch., Johann-Wolfgang-Goethe Univ., Senckenberganlage 27, 6000 FRANKFURT a.M., W.Germany

a Functional variability of tonofilament bundles in epidermal cells during embryonic development, wound healing and tissue culture (time-lapse cinemicrography, histochemistry, electron microscopy). *Lebistes reticulatus (Poeciliidae), Pterophyllum scalare (Cichlidae, Teleostei)*

b Variation of dry mass/ water ratio in different parts of the egg from fertilization through first cleavage, studied by interference microscopy. *Psammechinus miliaris (Echinoidea)*

c Electron microscopic study of pigment granule formation in melanophores. *Pterophyllum scalare (Cichlidae), Lebistes reticulatus (Poeciliidae, Teleostei)*

d Analysis of pigment granule movement in situ and in cultured cells. *Pterophyllum scalare (Cichlidae), Lebistes reticulatus (Poeciliidae, Teleostei)*

BERENDES, H. D. Dr., Prof. — Zool. Lab., Dept. of Cell Biol., Univ. van Nijmegen, Driehuizerweg 200, NIJMEGEN, Netherlands •

a Induction and repression of puff activity in polytene chromosomes. *Drosophila* spp. *(Diptera)*

b Gene function and differentiation in salivary gland cells. *Drosophila* spp. *(Diptera)*

c Hormonal regulation of postembryonic development. *(Diptera)*

BERENDSEN, W. Drs. — Biol. Ultrastruct. Research Unit, State Univ., Janskerkhof 3, UTRECHT, Netherlands

a Experimental morphology of cytoplasmic structures in early developmental stages. *Limnaea stagnalis (Pulmonata, Gastropoda)*

BERESFORD, W. A. D.Phil. — Dept. of Anat., Med. Center, West Virginia Univ., MORGANTOWN, W.Va. 26506, U.S.A.

a The influence of hypervitaminosis A on the developing temporo-mandibular joint. *Rattus norvegicus (Rodentia)*

b Fracture healing in the os priapi and mandible and its response to castration or the administration of anabolic androgenic hormone. *Rattus norvegicus (Rodentia)*

BERG, W. E. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.

BERGERARD, J. Dr.ès Sci., Prof. — Lab. de Zool., Fac. des Sci., 91 ORSAY, France

a Effects of thermal stress on sexual differentiation. *Carausius morosus (Cheleutoptera)*

b Effects of thermal stress and supernumerary chromosomes on development. *Locusta migratoria (Orthoptera)*

BERGQUIST, H. Ph.D. — Zool. Inst., Univ., of Gothenburg, 4de Långgatan 7B, GÖTEBORG SV, Sweden

BERLYN, G. P. Ph.D., Prof. — School of Forestry, Yale Univ., 205 Prospect St., NEW HAVEN, Conn. 06511, U.S.A.

a Quantitative cytochemical investigations of radiation effects on nucleic acids, proteins and lignification in relation to senescence and cellular death. *Pinus lambertiana (Gymnospermae)*

BERNARD, C. Lic.ès Sci., M.A. — Lab. de Physiol. Anim., Fac. des Sci., 40 Av. de Recteur Pineau, 86 POITIERS, France

a Electrophysiological study of the embryonic heart. *Rattus norvegicus, Cavia porcellus (Rodentia)*

BERNARD, F. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38-GRENOBLE, France

BERNDORFER, A. Dr.med.habil. — Childrens Hosp. "Paul Heim", Dept. for Congenital Malformations, Üllöi ut 86, BUDAPEST VIII, Hungary
— Private address: Benczur utca 39/a, BUDAPEST VI, Hungary

a Clinical embryopathology.

b Intrauterine regenerations of congenital malformations.

c Biological study of malformations.

d Etiology of malformations from clinical viewpoints.

BERNFIELD, M. R. M.D. — Dept. of Pediat. and Human Developm., School of Med., Stanford Univ., 300 Pasteur Drive, PALO ALTO, Calif. 94305, U.S.A.

a Embryonic pancreas and salivary gland: synthesis of macromolecules (collagen, RNA, enzymes) during inductive interactions in vitro; relation between DNA synthesis and differentiation. *Mus musculus (Rodentia)*

b Extracellular materials (collagen, mucopolysaccharide) during in vitro morphogenesis (pancreas, salivary gland). *Mus musculus (Rodentia)*

c Translation level controls (tRNA, ribosomes) during embryonic and hormonal-induced development. *Gallus domesticus (Aves)*

BERNSTEIN, G. S. Ph.D., M.D. — Dept. of Reprod. Physiol., Los Angeles County Gener. Hosp., LOS ANGELES, Calif. 90033, U.S.A.
— Dept. of Obstet. and Gynecol., Univ. of S.California, School of Med., P.O.Box 96, LOS ANGELES, Calif. 90033, U.S.A.
(no embryological work in progress)

BERREUR (BONNENFANT), Mrs. J. Dr.ès Sci. — Lab. de Génét. Evol. et de Biométrie, C.N.R.S., 91 GIF-sur-YVETTE, France

a Contrôle hormonal de la différenciation sexuelle. *(Isopoda, Crustacea)*

b Recherches sur les contrôles endocrines de la gamétogenèse par la culture in vitro. *(Malacostraca, Crustacea)*

BERRILL, N. J. Ph.D. — 410 Swarthmore Ave., SWARTHMORE, Pa. 19081, U.S.A.

a Regeneration; metamorphosis: asexual reproduction (histogenesis). *Branchiomma (= Dasychone) nigromaculata, Sabella melanostigma (Sabellidae, Polychaeta)*

BERRY, M. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England

a Effects of X-irradiation on central nervous development

BERRY, S. J. Ph.D. — Dept. of Biol., Wesleyan Univ., MIDDLETOWN, Conn. 06457, U.S.A.

a Nucleic acid metabolism during differentiation (ultracentrifugation, gradient centrifugation, autoradiography, chromatography). *Hyalophora cecropia (Lepidoptera)*

b Endocrine control of differentiation (light and electron microscopy, autoradiography, organ culture). *(Saturniidae, Leptidoptera)*

BERTALANFFY, F. D. Ph.D., Prof. — Dept. of Anat., Univ. of Manitoba, 750 Bannatyne Ave., WINNIPEG 3, Manitoba, Canada

a Rates of cell division of neoplastic cell populations. *Rattus rattus, Mus musculus (Rodentia)*

b Mitotic rates of regenerating liver parenchyma. *Rattus rattus (Rodentia)*

c Cell renewal and cytodynamics of normal cell populations. *Rattus rattus (Rodentia)*

d Effects of cytosine arabinoside on cell development and proliferation. *Rattus rattus (Rodentia)*

BERTMAR, G. Ph.D. — Sect. of Ecolog. Zool., Dept. of Biol., Univ. of Umeå, 90187 UMEÅ, Sweden

a Experimental developmental morphology of the olfactory organ. *Salmo* spec. *(Teleostei)*

b Developmental morphology of the epibranchial organs. *Coregonus (Coregonidae), Clupea (Clupeidae), Citharinus (Characidae, Teleostei)*

BERTOLINI, B. Dr.Biol.Sc. — Ist. di Anat. Comp. "Battista Grassi", Fac. di Sci., Univ. di Roma, Via A. Borelli 50, 00161 ROMA, Italia

a Ultrastructural cytochemistry of the various cell types in the oviduct during the reproductive cycle and under experimental conditions. *(Amphibia)*

b Subcellular localization of acid hydrolases in the acrosome of spermatozoa. *Paracentrotus lividus (Echinoidea), Triturus cristatus (Urodela), Rattus norvegicus (Rodentia)*

BERTON, J. P. Dr. — Centre de Biol. Appl., Ecole de Perfectionnement Agric., 36 AZAY-le-FERRON, France
— Unité de Rech. de Physiol. Placent., I.N.S.E.R.M. — U 11, Hôp.St.Antoine, PARIS 12e, France

a Role of mesonephros and metanephros in composition of amniotic and allantoic fluids (intra-uterine surgery). *Ovis aries, Sus scrofa (Artiodactyla), Oryctolagus cuniculus (Lagomorpha)*

b Chorio-allantoic cell structure. *Ovis aries, Sus scrofa (Artiodactyla), Oryctolagus cuniculus (Lagomorpha)*

c Hypertrophic compensatory response of fetal kidney to unilateral nephrectomy in vivo. *Ovis aries, Sus scrofa (Artiodactyla), Oryctolagus cuniculus (Lagomorpha)*

d Development of fetal lung after nephrectomy in vivo. *Ovis aries, Sus scrofa (Artiodactyla), Oryctolagus cuniculus (Lagomorpha)*

BETCHAKU, T. D.Sc. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a In vitro study on the mechanism of contact inhibition in embryonic myocardioblasts (time-lapse cinematography and electron microscopy). *Gallus domesticus (Aves)*

b Cellular mechanism of formation of the regeneration blastema (tissue culture, time-lapse cinematography, autoradiography, electron microscopy and cytochemistry). *(Planariidae, Turbellaria)*

BETTANIN (BELGRANO), Mrs. S. Dr.Nat.Sci. — Ist. di Zool., Univ. di Genova, Via Balbi 5, GENOVA, Italy

a Embryo development of a parthenogenetic marine form. *Penilia avirostris (Cladocera, Crustacea)* (in collaboration with N. DELLA CROCE)

b Growth of the embryo. *Penilia avirostris (Cladocera, Crustacea)* (in collaboration with N. DELLA CROCE)

c Formation of resting eggs. *Penilia avirostris (Cladocera, Crustacea)* (in collaboration with N. DELLA CROCE)

BETZ, T. W. Ph.D. — Dept. of Biol., Fac. of Sci., Carleton Univ., OTTAWA 1, Ont., Canada

a Hormonal control of the functional differentiation of the duodenal mucosa and the retina in the embryo. *Gallus domesticus (Aves)*

b Hormonal and dietary control of embryonic growth. *Gallus domesticus (Aves)*

BEYNON, A. D. G. B.D.S. — Dept. of Oral Anat., The Dental School, Univ. of Newcastle upon Tyne, Northumberland Rd., NEWCASTLE upon Tyne NE1 8TA, England.

a Development of the root and periodontal ligament of the molar teeth. *(Rodentia)*

BHAGAVAN, N. V. Ph.D. — Dept. of Anat., School of Med., Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.

BHATTACHERJEE, S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, West Bengal, India

BHUSSRY, B. R. D.D.S., Ph.D., Prof. — Dept. of Anat., School of Med., Georgetown Univ., 3900 Reservoir Rd., N.W., WASHINGTON, D.C. 20007, U.S.A.

BIAGIONI, M. Dott. — Ist. di Biol. Gener., Fac. di Med., Via del Giochetto, 06100 PERUGIA, Italy

a Influenza dei sali di cobalto sull'eritropoiesi. *Oryctolagus cuniculus (Rodentia)*

BIBORSKI, J. — Dept. of Reprod. Physiol., Inst. of Zootech., A.Mickiewicza 24-28, KRAKÓW, Poland

BIEBER, S. Ph.D. — Richard L. Conolly Coll., Long Island Univ., 385 Flatbush Ave., Extension, NEW YORK, Brooklyn N.Y. 11201, U.S.A.

BIELAŃSKA (OSUCHOWSKA), Mrs. Z. Dr., Prof. — Dept. of Histol. and Embryol., Fac. of Vet. Med., Warsaw Agricult. Univ., Grochowska 272, WARSZAWA, Poland

a Histochemical studies on differentiation of gonads. *Sus domesticus (Artiodactyla)* and other spp. *(Vertebrata)*

BIELKA, H. Dr.rer.nat.habil. — Inst. für Zellphysiol., Deutsche Akad. der Wissensch. zu Berlin, Lindenberger Weg 70, 1115 BERLIN-Buch, East.Germany

BIER, K. † Dr.rer.nat., Prof. — Zool. Inst. der Westf. Wilhelms-Univ., Badestr. 9, 44 MÜNSTER/Westf., W.Germany
(deceased)

BIERNE, J. D.E.S. — Lab. de Biol. Génér., Fac. des Sci., B.P. 347, 51 REIMS, France

BIESENBEEK, F. J. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM, Netherlands

a Light-microscopical, electron-microscopical, histochemical, physiological and experimental teratogenetic studies of heart development in the embryo. *Gallus domesticus (Aves)* (in collaboration with J. DRUKKER, H. M. LAANE and J. A. LOS)

BIGGELAAR, J. A. M. v. d. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a Nucleic acid metabolism during early developmental stages. *Limnaea stagnalis (Gastropoda)*

b Synthesis of proteins during early developmental stages. *Limnaea stagnalis (Gastropoda)*

BIGGERS, J. D. D.Sc., Ph.D., Prof. — Div. of Popul. Dynamics, School of Hyg. and Publ. Health, The Johns Hopkins Univ., 615 North Wolfe St., BALTIMORE, Md. 21205, U.S.A.

a Organ culture of fallopian tubes and ovaries. *(Mammalia)*

b Culture and metabolism of eggs. *(Mammalia)*

c Oocyte maturation. *(Asteroidea), Homo sapiens* and other spp. *(Mammalia)*

d Reproduction and embryology of wild animals. *(Mammalia)*

BIJTEL, Miss J. H. Dr.Sc., M.D. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands •

BILLETT, F. S. Ph.D. — Dept. of Zool., Univ. of Southampton, SOUTHAMPTON SO9 5NH, England

a Differentiation of embryonic epidermis. *Xenopus laevis (Anura), Ambystoma mexicanum (Urodela)*

b Fine structure of early oocytes, pre-vitellogenic phase. *Xenopus laevis (Anura), Ambystoma mexicanum (Urodela)*

BILLINGTON, W. D. Ph.D. — Dept. of Zool., Univ. of Oxford, Parks Road, OXFORD OX1 3PF, England

a Biology of the trophoblast; immunological aspects of mammalian pregnancy. *Mus musculus (Rodentia)*

BIRCH (ANDERSEN), A. — State Serum Inst., Amagerboulevard 80, COPENHAGEN S, Denmark

BIRGE, W. J. Ph.D., Prof. — Dept. of Zool., Univ. of Kentucky, Funkhouser Bldg., LEXINGTON, Ky. 40506, U.S.A.

BIRKY, C. W., Jr. Ph.D. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.

BISHOP, D. W. Ph.D., Prof. — Dept. of Physiol., Med. Coll. of Ohio at Toledo, P.O.Box 6190, TOLEDO, Ohio 43614, U.S.A.

a Contractile protein and contractile mechanisms of spermatozoa. *(Mammalia)*

b Testicular enzymology. *(Mammalia)*

c Immunologic impairment of spermatogenesis. *Cavia* spec. *(Rodentia)*

BISHOP, M. W. H. Ph.D. — Dept. of Anim. Husbandry, Univ. of Bristol, Langford House, Langford, BRISTOL, England

BISHOP (CALAME), Mrs. S. M. Lic.ès Sci. — Dept. of Poultry Husbandry, Univ. of California, DAVIS, Calif. 95616, U.S.A. •

BLACK, R. E. Ph.D., Prof. — Dept. of Biol., Coll. of William and Mary, WILLIAMSBURG, Va. 23185, U.S.A.

a Use of isotopes to trace metabolic pathways in embryos. (marine *Invertebrata)*

b Development of enzymes related to Krebs cycle in embryos. (marine *Invertebrata)*

BLACKLER, A. W. Ph.D., Prof. — Sect. of Genet., Developm. & Physiol., Div. of Biol. Sci., Stimson Hall, ITHACA, N.Y. 14850, U.S.A. •

BLAKE, J. A. Ph.D. — Pacific Marine Station, Univ. of the Pacific, DILLON BEACH, Calif. 94929, U.S.A.

a Reproduction and larval development from egg through metamorphosis in California and New England species. *Polydora ligni, P. commensalis, P. concharum, P. socialis, P. caulleryi, P. quadrilobata, P. websteri, P.* sp. nov., *Streblospio benedicti, Prionospio pygmaeus (Polychaeta)*

BLANCHET, J. P. Dr.Spec. — Sect. de Biol. Gén. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Evolution des deshydrogénases lactiques au cours de l'érythropoièse embryonnaire. *Gallus domesticus (Aves)*

BLANDAU, R. J. Ph.D., M.D. — Dept. of Biol. Structure, School of Med., Univ. of Washington, SEATTLE 5, Wash., U.S.A.

BLAXTER, J. H. S. M.A. — Dept. of Nat. Hist., Marischal Coll., Univ. of Aberdeen, ABERDEEN, Scotland, U.K.

BLECHSCHMIDT, E. Dr.med., o.ö.Prof. — Anat. Inst. der Univ., Kreuzbergring 36, 34 GÖTTINGEN, W.Germany

a Elektronenmikroskopie des Embryos. *Homo sapiens (Primates)*

BLOCH, D. P. Ph.D., Prof. — Botany Dept. and Cell Research Inst., Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.

a Mechanism of histone synthesis and function of histone variants in sperm development. *Sphaerocarpos donnellii, S. texana (Hepaticae), Mytilus californicus (Lamellibranchia). Rehnia spinosa (Katydidae, Orthoptera)*

BLOCK, M. H. Ph.D., M.D., Prof. — Div. of Hematol., Univ. of Colorado, Med. Center, 4200 E. 9th Ave., DENVER, Colo. 80220, U.S.A.

a The effect of total body radiation upon development, especially bloodforming tissues. *Didelphys virginiana (Marsupialia)*

BLOM, E. Dr.med.vet. — State Veter. Serum Lab., Bülowsvej 27, 1870 COPENHAGEN V, Denmark

a Studies on pathological conditions in the testis, epididymis and accessory sex glands. *Bos taurus (Artiodactyla)*

b The ultrastructure of normal and pathological sperm. *Bos taurus (Artiodactyla)* (in collaboration with A. BIRCH-ANDERSEN, State Serum Inst.)

BLONDELET, J. Dr.en Méd. — Lab. d'Embryol., Fac. de Med., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France

BLONDHEIM, Mrs. S. A. M.Sc. — Dept. of Entomol. and Venomous Anim., The Hebrew Univ., JERUSALEM, Israel

BLOOM, S. E. Ph.D. — Dept. of Poultry Sci., New York State Coll. of Agric. at Cornell Univ., 210 Rice Hall, ITHACA, N.Y. 14850, U.S.A.

a Cytochemistry of binucleated red blood cells in embryos and adults. *Meleagris gallopavo (Aves)*

b Study of chromosomal anomalies in embryos. *Gallus domesticus, Meleagris gallopavo (Aves)*

c Cytology of mitotic mutants as related to age and sex. *Meleagris gallopavo (Aves)*

d Development of trisomic, triploid, and haploid embryos. *Gallus domesticus (Aves)*

BLOUNT, R. F. Ph.D., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex. 77550, U.S.A.

a Morphological changes in kidney during development and changes with age. *Mus musculus (Rodentia)*

BLUEMINK, J. G. Ph.D. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a Electron microscopic investigation of cytokinesis during the first cleavage cycle. *Ambystoma mexicanum (Urodela)* (in collaboration with P. D. NIEUWKOOP)

b Electron microscopic investigation of cell-to-cell junctions in embryos between first cleavage and late neurula stage. *Ambystoma mexicanum (Urodela), Xenopus laevis (Anura)*

c Subcellular aspects of functional differentiation in the parotid gland. *Rattus rattus (Rodentia)*

BLUNT, M. H. Ph.D. — Dept. of Agric. Biol., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia

a Development of haemoglobins in the embryo. *(Caprinae, Artiodactyla)*

BLUNT, M. J. Ph.D., Prof. — School of Anat., Univ. of New South Wales, P.O. Box 1, KENSINGTON, N.S.W. 2033, Australia

a Myelination in developing optic nerve. *Felis domesticus (Carnivora)*

b Development and function of neuroglia in optic nerve. *Felis domesticus (Carnivora)*

BLUZAT, R. R. Dr.3ème cycle — Lab. de Zool., Fac. des Sci., Univ. de Paris, 91 ORSAY, France

a Experimental study with ionizing radiations of development of the gonads. *Leptinotarsa decemlineata (Coleoptera)*

b Structure and ultrastructure of germinal determinant in the egg. *Leptinotarsa decemlineata (Coleoptera)*

c Experimental study with ionizing radiations in early embryogenesis. *Leptinotarsa decemlineata (Coleoptera)*

BOCKSTAHLER, L. Ph.D. — Arbeitsgr. Biochem. Embryol., Max-Planck-Inst. für Zellbiol., Abt. Bauer, Melanchthonstr. 36, D 7400 TÜBINGEN, W.Germany

a Molecular biology of embryo. *Paracentrotus lividus (Echinoidea)*

BOCZKOWSKA, Mrs. J. B.Sc. — Dept. of Histol. and Embryol., Acad. of Med., ul.Narutowicza 60, ŁÓDŹ, Poland

a Histochemical studies on distribution and activity of acid phosphatase and beta-glucuronidase in the lung and the liver during embryogenesis. *Xenopus laevis (Anura), Rattus norvegicus, Cavia cobaya (Rodentia)*

BODELET, B. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France

BODEMER, C. W. Ph.D. — School of Med., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

a Electrophysiology of developing nervous system. *Didelphys virginiana (Marsupialia)*

BODENSTEIN, D. Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va. 22903, U.S.A.

a Intergeneric grafts of organ discs. *(Diptera)*

b The role of the prothoracic gland in postembryonic development. *Periplaneta americana (Dictyoptera)*

BODMAN, Sister M. C. Ph.D., Prof. — Dept. of Oral Pathol., School of Dent., Loyola Univ., 1757 W.Harrison St., CHICAGO, Ill. 60612, U.S.A.

a Ultracentrifugation separation of lysosomes in resorbing tadpole tails. *Rana catesbeiana (Anura)*
b Lysosome activity in outer enamel epithelium of erupting molar (histochemical study). *Rattus norvegicus (Rodentia)*

BOELL, E. J. Ph.D., D.Sc., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Changes in enzymatic activity and morphology of mitochondria in embryonic tissues during growth and differentiation. *(Amphibia, Aves)*
b Effects of hormones on enzyme synthesis in specific target tissues of the developing embryo during tissue differentiation and regression

BOFFI LUCARELLI, Mrs. A. M. Dr. — Ist. di Biol. Gener., Fac. di Med., Univ. di Roma, Policlinico Umberto I, 00100 ROMA, Italy

BOGATOVA (NIKANOROVA), Mrs. R. I. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

BOHN, H. Dr.rer.nat. — Zool. Inst. der Univ., Luisenstr. 14, 8000 MÜNCHEN, W.Germany
a Regeneration and transplantation experiments on limbs; polarity and gradient systems. *Leucophaea maderae, Periplaneta americana (Dictyoptera)*

BOILLY, B. Dr.ès Sci. — Lab. de Biol. Anim., Fac. des Sci., B.P.36, 59 LILLE-Distribution, France
a Morphogenesis in regeneration. *(Polychaeta)*
b Origin of regeneration cells. *(Polychaeta)*
c Factors of dedifferentiation, activation and differentiation of regeneration cells. *(Annelida)*

BOLLUM, F. J. Dr. — Depts. of Microbiol. and Biochem., Med. Center, Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.
a Analysis of the template activity of DNA during the terminal lens cell differentiation. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)
b Analysis of the primer activity of DNA during the terminal lens cell differentiation. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)
c Analysis of the physico-chemical properties of DNA in differentiating cells. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus musculus, Rattus rattus (Rodentia), Homo sapiens (Primates)* (in collaboration with S. P. MODAK)

BOLOGNANI (FANTIN), Mrs. A. M. — Ist. di Anat. Comp., Univ. di Pavia, Piazza Botta 10, 27100 PAVIA, Italy
a The integument of foot and mantle (histochemical and biochemical research). *(Polyplacophora; Scaphopoda; Gastropoda; Lamellibranchia)*
b The glands associated with the reproductive tract (histochemical methods). *Lymnaea stagnalis. (Pulmonata, Gastropoda)*

BOLOGNARI, A. Prof. — Ist. di Zool. e di Anat. Comp., Fac. di Sci., Univ. di Messina, Via dei Verdi 75, 98100 MESSINA, Italy
a Biochemical aspects of yolk globules formed artificially by means of deoxyribonuclease. *Sphaerechinus granularis, Paracentrotus lividus (Echinoidea)*
b Golgi apparatus in oocytes (electron microscopy). *Sphaerechinus granularis, Paracentrotus lividus (Echinoidea)*

BONDI, C. Dott., Prof. — Ist. di Anat. Comp., Fac. di Sci., Univ. di Perugia, Via A. Pascoli, PERUGIA, Italy

BONNER, J. T. Ph.D., Prof. — Dept. of Biol., Princeton Univ., PRINCETON, N.J. 08540, U.S.A.
a Problems of morphogenetic movements and differentiation. *(Acrasiales)*

BONNY PILO, Dr. — Dept. of Zool., Fac. of Sci., M.S. Univ. of Baroda, BARODA-2, India
a Liver, spleen and lymph gland regeneration. *(Reptilia; Aves)*

BONS, J. Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Montpellier, Place Eugène Bataillon, 34 MONTPELLIER, France
a Embryonic development. *Agama bibroni (Agamidae, Lacertilia)*

BONTING, S. L. Ph.D., Prof. — Dept. of Biochem., Univ. of Nijmegen, Kapittelweg 40, NIJMEGEN, Netherlands
a Development of the rhodopsin cycle; rhodopsin, electroretinogram and morphology from birth till maturity. *Canis domesticus (Carnivora)* (in collaboration with F. J. M. DAEMEN)
b Na-K activated ATPase activity of developing retina in normal animals and in animals with hereditary retinitis pigmentosa. *Rattus norvegicus (Rodentia)* (in collaboration with F. J. M. DAEMEN)

BOOKHOUT, C. G. Ph.D., Prof. — Marine Lab., Duke Univ., BEAUFORT, N.C. 28516, and Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.

BOON (NIERMEYER), Mrs. E. K. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
a Influence of some antibiotics on certain stages of development. *Limnaea stagnalis (Gastropoda)*

BOONE, M. A. Ph.D., Prof. — Poultry Sci. Dept., Clemson Univ., CLEMSON, S.C. 29631, U.S.A.

a Ultrastructure of spermatozoa. *Gallus domesticus, Meleagris gallopavo (Aves)*
b Effect of high ambient temperature on semen and egg production. *Gallus domesticus (Aves)*
c Development of drug bio-assay system by growing embryos in beakers. *Gallus domesticus (Aves)*

BOOTHROYD, B. Ph.D. — Histol. Dept., Fac. of Med., Univ. of Liverpool, LIVERPOOL, Lancashire, England

BOPP, M. Dr.rer.nat., Prof. — Bot. Inst., Univ. Heidelberg, Hofmeisterweg 4, 69 HEIDELBERG, W.Germany
a Crown-gall development and initiation. *Bryophyllum daigremontianum (Crassulaceae)*
b Development; morphogenesis of protonema. *Funaria hygrometrica (Bryophyta)*
c Shoot growth and DNA synthesis

BORGHESE, E. M.D., Dr.Biol.Sci., Prof. — Ist. di Anat. Topogr., Univ. di Napoli, Via L. Armanni 5, 80138 NAPOLI, Italia
a Culture in vitro of embryonic organs. *Mus musculus (Rodentia)*
b Effect of ionizing radiations on embryonic development. *(Mammalia)*
c Embryology of kidney. *Mus musculus (Rodentia)*

BORISOV, I. N. Cand.biol.sci. — Chair of Histol. and Embryol., Archangelsk State Med. Inst., Av.P.Vinogradow 51, ARCHANGELSK, U.S.S.R.
a Origin and histogenesis of cross-striated muscles. *Lampetra fluviatilis (Agnatha), Torpedo ocellata, Scyllium canicula (Selachii), Huso huso, Acipenser güldenstädti (Chondrostei), Salmo salar, Coregonus lavaretus (Teleostei), Rana temporaria, Hynobius keyserlingii (Amphibia), Lacerta saxicola, Natrix natrix (Reptilia), Gallus domesticus (Aves), Mus musculus, Sus domesticus (Mammalia)*

BOROJEVIC, R. D.E.S. — Lab. de Biol. Invert. Marins, Museum Natl. d'Hist. Nat. Paris, 57 rue Cuvier, PARIS Ve, France
a Descriptive and experimental morphology, morphogenesis. *(Porifera)*

BORSTEL, R. C. von Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a Analysis of the template activity of DNA during the terminal lens cell differentiation. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)

BORSUK, Mrs. R. A. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

BOSCHKOW, D. K. M.Sc. — Inst. of Zool., Bulg. Acad. of Sci., bul. Ruski 1, SOFIA, Bulgaria

BOSCHWITZ, Miss B. D. Ph.D. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
a Seasonal changes in the parathyroid. *Bufo viridis (Anura)*
b Seasonal changes in the ultimobranchial body. *Bufo viridis (Anura)*
c Multiplication of motor end plates in the diaphragm of growing animals. *Mus musculus (Rodentia)*
d Thyroid deficiency and metamorphosis. *Pelobates* spec., *Hyla* spec. *(Anura)*
e Second metamorphosis: influence of prolactin on the water drive; influence of prolactin on the ultimobranchial body and its involvement in the water drive. *Bufo viridis (Anura)*

BOSSHARD, N. U. Dipl.Natw. — Inst. für Genet., Univ. des Saarlandes, 66 SAARBRÜCKEN 11, W.Germany
a Influence of chemical stimuli on gene activity. *Galleria mellonella (Lepidoptera)*

BOSSY, J. G. M. M.D., Prof. — Lab. d'Anat., Fac. de Méd., 34 MONTPELLIER, France
a Study of melanotic embryo of 15 mm V.C. *Homo sapiens (Primates)*
b Mitotic index in the ependymal layer of the embryonic brain: topographic variations. *Homo sapiens (Primates)*
c Development of the mucous lining of the auditory tube. *Homo sapiens (Primates)*
d Myelinization of the dorsal root-spinal cord junction. *Homo sapiens (Primates)*
e Development of neuroblasts grafted in the adult spinal cord. *Rattus norvegicus (Rodentia)*

BOT, A. P. C. M.D. — Netherlands Central Inst. for Brain Research, IJdijk 28, AMSTERDAM, Netherlands
a Morpho-physiological correlations in the cerebral hemisphere during embryonic development, using seizures as a pathophysiological phenomenon. *Gallus domesticus (Aves)*
b Morpho-physiological correlations between cellular activity and structural development in the embryonic celebral hemisphere. *Gallus domesticus (Aves)*

BOTERENBROOD, Miss E. C. Ph.D. — Hubrecht Lab. (Intern. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a Analysis of regional distribution of differentiation tendencies in the prosencephalic part of the neural plate. *Triturus alpestris, Pleurodeles waltlii (Urodela)*
b Analysis of dorso-ventral polarity in mesoderm induction and endoderm differentiation. *Ambystoma mexicanum (Urodela)* (in collaboration with P. D. NIEUWKOOP)
c Cinematographical study of normal cleavage pattern and gastrulation movement. *Ambystoma mexicanum (Urodela), Xenopus laevis (Anura)* (in collaboration with K. HARA)

BOTTE, V. Vet.Dr. — Ist. di Zool. e Anat. Comp., Fac. di Sci., Univ. degli Studi, Piazza F. Marchetti, CAMERINO, Italy

BOUCK, G. B. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Biochemistry and cytology of development. *Fucus vesiculosus, F. spiralis (Phaeophyta)*
BOULEKBACHE, H. Lic.ès Sci., D.E.A. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France
a The relationship between glycolytic enzymes and respiration in early development. *Salmo irideus (Teleostei)*
b Qualitative changes in the isoenzymes of L.D.H., aldolase and glucose-6-phosphate dehydrogenase during development. *Salmo irideus (Teleostei)*
c Electron microscopic study of mitochondria and yolk platelets in early development. *Salmo irideus (Teleostei)*
BOUVET, J. L. Dr. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Experimental studies on the development of the paired fins. *Salmo trutta fario (Teleostei)*
BOVBJERG (BLANCHARD), Mrs. A. M. Ph.D. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Skin grafting: factors affecting graft rejection and the nature of the immune reaction. *Rana pipiens, R. catesbeiana (Anura)*
b Development of skin, in larvae metamorphosing normally and with exogenous thyroid hormone. *Rana pipiens (Anura)*
BÖVING, B. G. M.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A. •
a Blastocyst spacing, orientation and implantation mechanisms. *Oryctolagus cuniculus (Lagomorpha)*
b Relation of trophoblast invasion to blood vessels underlying uterine epithelium, and the anatomical, mechanical and chemical basis for it. *Oryctolagus cuniculus (Lagomorpha)*
c Identification and function of non-cellular blastocyst coverings. *Oryctolagus cuniculus (Lagomorpha)*
d Structure and function of trophoblast knobs. *Oryctolagus cuniculus (Lagomorpha)*
BOWEN, Mrs. S. T. Ph.D., Prof. — Dept. of Cell and Molec. Biol., School of Nat. Sci., San Francisco State Coll., SAN FRANCISCO, Calif. 94132, U.S.A.
a Changes in hemoglobin composition in development: effect of environment on hemoglobin induction in a clone of genetically identical parthenogenetic females. *Artemia salina (Anostraca, Crustacea)*
BOYD, J. D. † D.Sc., M.D., Prof. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England
(deceased)
BOYDE, A. Ph.D. — Anat. Dept., Univ. Coll. London, Gower St., LONDON W.C.1, England
a Structure and development of hard tissues; descriptive morphology using electron microscopy, scanning electron microscopy, scanning probe X-ray microanalysis. *(Mammalia)*
BOYDEN, E. A. Ph.D., Prof. (Emer.) — Dept. of Biol. Struct., Med. School, Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.
BRACHET, J. L. A. M.D., D.Sc., Prof. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium •
a Studies on the metabolism of lethal hybrids. *(Echinoidea; Amphibia)*
b Origin, nature and role of cytoplasmic DNA. *Xenopus laevis (Anura)*
c DNA synthesis during maturation. *(Echinoidea; Amphibia)*
d Effects of cortical lesions on DNA, RNA and protein sythesis. *Xenopus laevis, Rana temporaria (Anura)*
e Effects of "conditioned medium" from dissociated morulae on development and nucleic acid synthesis. *Paracentrotus lividus (Echinoidea)*
BRADBUR, C. Ph.D. — Biochem. Dept., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va. 22901, U.S.A.
BRADEN, A. W. H. Ph.D. — Div. of Anim. Physiol., C.S.I.R.O., Ian Clunies Ross Anim. Res. Lab., Great Western Highway, (P.O.Box 144, Parramatta), PROSPECT, N.S.W. 2150, Australia
a Fertilization. *Ovis* spec. *(Artiodactyla)*
b Prenatal mortality. *Ovis* spec. *(Artiodactyla)*
BRADLEY, M. O. B.A. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif. 94305. U.S.A.
a Developmental profile of arginase specific activity in very early and later embryonic liver and kidney. *Mus musculus (Rodentia)*
BRAHMA, S. K. D.Phil., Ph.D. — Dept. of Anat. and Embryol., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands •
a Immunochemical studies of lens proteins. *(Vertebrata)* (in collaboration with W. J. van DOORENMAALEN)
b Autoradiographic and cytochemical studies of tissue differentiation. *(Vertebrata)*
BRAMBELL, F. W. R. Ph.D., D.Sc., Prof. — address unknown •

BRÄNDLE, K. A. Dr.rer.nat. — Zool. Inst. der Univ., Kaiserstr. 2, 75 KARLSRUHE, W.Germany

a Preparation and rearing of animals with six or more limbs for research on modes of locomotion. *Ambystoma* spec. *(Urodela)*

b Xenoplastic transplantation of neural plates for the study of relations between central nervous system and behaviour. *(Amphibia)*

c Preparation and rearing of animals with two heads connected in series (tandem heads) for study of relations between central nervous system and doubled sense organs. *Ambystoma mexicanum (Urodela)*

BRANDT, W. H. Ph.D., Prof. — Dept. of Bot. and Plant Pathol., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.

BRAUM, E. Dr. — Inst. für Hydrobiol. und Fisch.wiss., Univ. Hamburg, Olbersweg 24, 2 HAMBURG 50, W.Germany

a Developmental problems of eggs in the mud-water layers of lakes (prelminary experiments on incubation of exposed egg samples in a deep lake). *Coregonus wartmanni (Teleostei)*

b Malformations observed in newly hatched larvae. *Coregonus wartmanni (Teleostei)*

c The influence of temperature, oxygen pressure and water flow on eggs and larvae. *Esox lucius, Coregonus* spp. *(Teleostei)*

BRAVERMAN, M. H. Ph.D. — Cell and Radiat. Biol. Labs., Allegheny Gen. Hosp., 320 East North Ave., PITTSBURGH, Pa. 15212, U.S.A.

a Systems analysis of colony pattern and computer simulation of colony growth. *Podocoryne carnea (Hydroidea)*

b Macromolecular control of the initiation of lens morphogenesis and lens protein synthesis in vitro. *Gallus domesticus (Aves)*

BRESCIANI, J. M.Sc. — Inst. of Comp. Anat., Univ. of Copenhagen, Universitetsparken 15, COPENHAGEN Ø, Denmark

BREUCKER, Miss H. Dr. — Anat. Inst. der Univ. Hamburg, Martinistr. 52, 2000 HAMBURG-Eppendorf, W.Germany

a Electron miscroscopic studies of spermatozoa and spermatogenesis. *Ornithodorus moubata (Argasidae, Acarina), Graphidostreptus* spec. *(Diplopoda)*

BREUGEL, F. M. A. van — Dept. of Genet., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands

a Cytological differentiation in white-mottled mutants. *Drosophila melanogaster, D. hydei (Diptera)*

b Chromosomal puffs in lethal mutants. *Drosophila melanogaster, D. hydei (Diptera)*

BRICK, I. Ph.D., Prof. — Dept. of Biol., Grad. School of Arts and Sci., New York Univ., Washington Square, NEW YORK, N.Y. 10003, U.S.A.

a Tissue affinities in developing melanophores studied by time-lapse photography. *Ambystoma mexicanum (Urodela)*

b Genetic control of cell surfaces in the development of pigment pattern. *Ambystoma mexicanum (Urodela)*

c Analysis of melanophore determination at the molecular level. *Ambystoma mexicanum (Urodela)*

d Development of the eye, optic nerve, and optic tectum in reciprocal transplants of eye rudiments between embryos of varieties with and without eyes. *Astyanax mexicanus* (syn. *Anoptichthyes jordani) (Teleostei)*

e The surface of cells in different presumptive regions during gastrulation, studied by means of cell electrophoresis. *Rana pipiens (Anura)*

BRIDE, Miss J. Lic.ès Sci. — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France

a Développement embryonnaire de la glande uropygienne. *(Aves)* (en collaboration avec L. GOMOT)

BRIDE (VUILLET), Mrs. M. Lic.ès Sci. — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France

a Recherches sur le développement in vivo et in vitro du coeur. *Rana temporaria, Xenopus laevis (Anura)* (en collaboration avec L. GOMOT)

BRIEGLEB, W. Dr.rer.nat. — Inst. für Flugmedizin der DFVLR, Kölnerstr. 70, 532 BAD GODESBERG, W.Germany

a Einfluss von Licht und hoher Temperatur auf die Ontogenese einer neotenen Art aus einem Höhlenbiotop. *Proteus anguinus (Proteidea, Urodela)*

b The influence of simulated weightlessness on development. *Tribolium castaneum (Coleoptera)*

c The influence of simulated weightlessness by rotation on the early development (polarization). *Ascaris (Nematoda), (Anura)* (in collaboration with G. TEUCHERT)

d The influence of simulated weightlessness (by submersion) on metamorphosis. *(Anura)* (in collaboration with G. TEUCHERT)

BRIEN, P. L. Dr.Sc.Zool., Prof. Hon. — Inst. de Zool. Torley-Rousseau, Univ. libre de Bruxelles, 50 Av. F.D. Roosevelt, BRUXELLES, Belgium

BRIGGS, R. W. Ph.D., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind. 47401, U.S.A. •

BRINCK-JOHNSEN, T. Ph.D. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

a Placental and fetal steroidogenesis. *Dasypus novemcinctus (Edentata)*

b Placental estrogens. *Sus scrofa (Artiodactyla)*

c Estrogens in pregnancy. *Felis catus (Carnivora)*

BRINSTER, R. L. V.M.D., Ph. D., Prof. — Lab. of Reprod. Physiol., School of Vet. Med., Univ. of Pennsylvania, 530 Lippincott Bldg., 25th & Locust Sts., PHILADELPHIA, Pa. 19103, U.S.A.

a Fertilization; physiology and biochemistry of ova and early cleavage stages. *(Mammalia)*

BRODY, S. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.

a Developmental genetics. *Neurospora* spec. *(Ascomycetes)*

b Biochemical mechanisms in morphogenesis.

BRØNDSTED, H. V. Dr.Phil., Prof. (Emer.) — Stockholmsgade 23, 2100 COPENHAGEN, Denmark •

a Physiology and regeneration. *(Porifera; Turbellaria)*

b Embryology. *Mus musculus (Rodentia)*

BROOKBANK, J. W. Ph.D., Prof. — Dept. of Zool., Univ. of Florida, GAINESVILLE, Fla. 32601, U.S.A.

a DNA synthesis in interordinal hybrids, fertilization through pluteus. *Strongylocentrotus purpuratus* x *Dendraster excentricus (Echinoidea)*

b Entoderm antigens of plutei. *Lytechinus variegatus (Echinoidea)*

BROOKS (LAWRENCE), Mrs. B. — Histol. Dept., Fac. of Med., Univ. of Liverpool, LIVERPOOL, Lancashire, England

BROOKS, Miss M. A. Ph.D., Prof. — Dept. of Entomol., Fish. and Wildlife, Univ. of Minnesota, ST. PAUL, Minn. 55101, U.S.A.

a Tissue differentiation, studied in cell culture, with respect to developmental potential as correlated with stages in the life cycle. *Malacosoma disstria (Lepidoptera)*

b The effect of intracellular symbiotic microorganisms on vitellogenesis and embryonic development of insects. *Blattella germanica, Periplaneta americana (Dictyoptera)*

BROSEMER, R. W. Ph.D., Prof. — Dept. of Chem., Washington State Univ., PULLMAN, Wash. 99163, U.S.A.

a The morphological and enzymic development of flight muscle. *Apis mellifera, Bombus* spec. *(Hymenoptera), Sarcophaga bullata (Diptera)*

BROUWER, P. J. Med.Drs. — Dept. of Anat. and Embryol., Free Univ. of Brussels, 97 rue aux Laines, BRUXELLES, Belgium

BROWN, D. D. M.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
— Dept. of Biol., Johns Hopkins Univ., Charles & 34th Sts., BALTIMORE, Md. 21218, U.S.A. •

a Biochemical studies of early development. *Rana pipiens, Xenopus laevis (Anura), Hyalophora cecropia* and other spp. *(Lepidoptera)* (in collaboration with L. P. GAGE, R. G. ROEDER and Y. SUZUKI)

BROWN, E. H. Ph.D. — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A.

a Genetic and cytological aspects of oogenesis. *Drosophila melanogaster (Diptera)*

BROWN, J. A. M. Ph.D. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind. 46556, U.S.A.

a Developmental physiology, particularly meristem metabolism in floral morphogenesis, *Arabidopsis thaliana (Cruciferae)*

b Floral induction as affected by deoxyriboside base analogues and photoperiod. *Arabidopsis thaliana (Cruciferae)*

c Photomorphogenic action spectra and threshold flux densities. *Arabidopsis thaliana (Cruciferae)*

d Pupal development and adult fertility as affected by deoxyriboside base analogues applied topically at onset of pupation. *(Nematocera, Diptera)* (in collaboration with G. B. CRAIG)

BROWN, J. W. Ph.D., Prof. — Dept. of Anat., Univ. of Alabama Med. Center, 1919 Seventh Ave. South, BIRMINGHAM, Ala. 35233, U.S.A.

BRUCE, L. Fil.Kand. — Zoophysiol. Inst., Univ. of Lund, Helgonavägen 3, 223 62 LUND, Sweden

a Biochemical and cytochemical analysis of intracellular yolk granules in early blastoderms with special regard to yolk DNA. *Gallus domesticus (Aves)*

BRUGAL, G. J. Y. Cherch. 3e Cycle — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

a Etude autoradiographique du cycle mitotique et de ses variations sous l'action des facteurs externes (température, thyroxine) à différents stades du développement. *Pleurodeles waltlii (Urodela)*

BRUMMETT, Miss A. R. Ph.D. — Dept. of Biol., Oberlin Coll., OBERLIN, Ohio 44074, U.S.A.

a Experimental analysis of morphogenetic movements and differentiation in the early gastrula by deletion-explantation techniques. *Fundulus heteroclitus (Teleostei)*

b Analysis of biochemical difference in various presumptive regions of the early gastrula. *Fundulus heteroclitus (Teleostei)*

c Factors influencing graft vs. host antagonism in anterior shield grafts. *Fundulus heteroclitus (Teleostei)*

d Electron microscopical studies on developing embryos. *Fundulus heteroclitus (Teleostei)*

BRUN, J. L. Dr.ès Sci. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Adaptation aux températures élevées. *Caenorhabditis elegans (Nematoda)*

BRUNO, R. Dr. — Inst. of Biochem., Univ. of Turin, Via Giolitti 34, 10123 TORINO, Italy

a Induction by prolactin of thyroid activation in larvae at advanced metamorphic stages. *Bufo bufo (Anura)* (in collaboration with Miss A. GUARDABASSI, M. OLIVERO, M. T. RINAUDO, E. CAMPANTICO and C. GIUNTA)

BRUNST, V. V. Dr.biol.Sc. — Roswell Park Mem. Inst., 666 Elm St., BUFFALO, N.Y. 14203, U.S.A.

a Experimental embryology. *Siredon mexicanum (Urodela)*

b Regeneration. *Siredon mexicanum (Urodela)*

c Chromosomes. *Siredon mexicanum (Urodela)*

d Tumors. *Siredon mexicanum (Urodela)*

e Radation effects. *Siredon mexicanum (Urodela)*

f Congenital abnormalities. *(Urodela)*

BRUST, R. A. Ph.D., Prof. — Dept. of Entomol., Fac. of Agric., Univ. of Manitoba, WINNIPEG 19, Manitoba, Canada

a The influence of thermal stress on development. *Aedes* spp. *(Culicidae, Diptera)*

b Survey on the occurrence of autogeny in subarctic species (field and laboratory observations). *Aedes* spp. *(Culicidae, Diptera)*

c Effect of mermithed parasitism on larval development. *Aedes* spp. *(Culicidae, Diptera)*

d Effect of photoperiod and temperature on the induction and termination of diapause in larvae and embryos. *Wyeomyia smithii, Aedes atropalpus (Culicidae, Diptera)*

BRYAN, J. H. D. Ph.D., Prof. — Dept. of Zool., Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.

a Cytochemical studies of gamete formation. *Mus musculus (Rodentia)*

b Nucleic acid-protein ratios during growth and differentiation. *Mus musculus (Rodentia)*

c Cytochemical studies of nuclear proteins in differentiating and adult tissues. *Mus musculus (Rodentia)*

d Studies of differentiation of spermatozoa in mutant animals (light- and electron microscope studies). *Mus musculus (Rodentia)*

BRYDEN, M. M. B.V.Sc., Ph.D. — Dept. of Anat., Vet. Coll., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

a Prenatal and postnatal development. *Mirounga leonina (Pinnipedia)*

b General embryology. *Ovis aries (Artiodactyla)*

BUCHANAN, G. D. Ph.D., Prof. — Dept. of Anat., Med. Coll. of Ohio, P.O.Box 6190, TOLEDO, Ohio 43614, U.S.A.

a Reproductive physiology, including histology and histochemistry of the reproductive tract. *Mustela furo (Carnivora)*

BUDEGUER de ATENOR, Mrs. M. S. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina

a Chemical factors involved in fertilization: oviducal origin of the diffusible factor. *Bufo arenarum (Anura)*

BUEHR, Miss M. L. Ph.D. — Dept. of Zool., The University, GLASGOW W.2., Scotland, U.K.

a Primordial germ cells. *Xenopus laevis (Anura)*

BUGGE, J. M.Sc. — Dept. of Anat., Royal Dental Coll., AARHUS, Denmark

a Development of the stapedial artery. *(Myomorpha, Rodentia)*

b Development of the cerebral, pericentricular vasculature. *Mus musculus (Rodentia)*

c Malformations of the vascular system of brain and head. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with P. A. KNUDSEN)

BÜHLER, R. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH-8006 ZÜRICH, Switzerland

a Peptides and free amino acids during development (separation by ion-exchange chromatography). *Drosophila melanogaster (Diptera)*

BULLIÈRE, D. Dr. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

a The regeneration and factors of morphogenesis in the larval leg. *Blabera craniifer (Dictyoptera)*

b Regeneration in the embryonic leg. *Blabera craniifer (Dictyoptera)*

BULLIÈRE (CHALLANDE), Mrs. F. Dr.spéc. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

a Embryonic development and mechanisms of embryonic moults. *Blabera craniifer (Dictyoptera)*

b Morphological and ultrastructural analysis of organogenesis by means of in vitro culture techniques. *Blabera craniifer (Dictyoptera)*

BULMER, D. M.D. — Chair of Human Morphology, Univ. of Southampton, SOUTHAMPTON, England

a Cytochemistry of developing female genital tract. Various spp. *(Mammalia)*

b Cytochemistry of placenta. *(Rodentia)*

BULSIEWICZ, Miss H. M.A. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland

a Karyology of congenital malformations. *Homo sapiens (Primates)*

BUÑO, W. M.D. — Sect. of Exper. Neurol., Inst. of Neurol., Hosp. de Clinicas, MONTEVIDEO, Uruguay

a Regulation of cochlear input in the developing animal. *Cavia cobaya (Rodentia)*

BURDA (WILSON), Mrs. D. J. Ph.D. — Dept. of Anat., School of Med., Stanford Univ., STANFORD, Calif. 94305 U.S.A.

a Development and experimental modification of cerebrovascular system. *Gallus domesticus (Aves)*

b Early growth and differentiation of brain. *Gallus domesticus (Aves)*

BURDI, A. R. Ph.D. — Dept. of Anat., Med. School, Univ. of Michigan, East Med. Bldg., ANN ARBOR, Mich. 48104, U.S.A.

BURDICK, M. L. Ph.D. — Dept. of Biol. Sci., Florida State Univ., TALLAHASSEE, Fla. 32306, U.S.A.

a Study of the cellular specificities responsible for controlling morphogenetic movements, using the reaggregation of dissociated cells as a test system. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

BURDON-JONES, C. Ph.D., Prof. — Dept. of Zool., School of Biol. Sci., Univ. Coll. of Townsville, P.O.Box 999, TOWNSVILLE, Qld., 4810 Australia •

a Development and regeneration. *Rhabdopleura normani, Cephalodiscus* spec. and other spp. *(Pterobranchia, Hemichordata)*

BURGESS, Miss A. M. C. Ph.D. — Dept. of Anat., London Hosp. Med. Coll., Turner St., LONDON E.1, England

a RNA synthesis in dedifferentiating and redifferentiating regenerating tissues. *Xenopus laevis, Ambystoma* spec. *(Amphibia)*

b Somite morphogenesis. *Xenopus laevis (Anura)*

BURIGHEL, P. Dr.biol.sci. — Ist. di Biol. Anim., Fac. di Sci., Via Loredan 10, 35100 PADOVA, Italy

a Asexual reproduction. *Botryllus schlosseri, Botrylloides leachi (Ascidiae)*

b Differentiation of digestive tract. *Botryllus schlosseri, Botrylloides leachi (Ascidiae)*

BURKART, T. Dipl.Natw. — Inst. für Genet., Univ. des Saarlandes, 66 SAARBRÜCKEN 11, W.Germany

a Role of electrolytes in limb regeneration and metamorphosis. *Triturus cristatus (Urodela), Xenopus laevis (Anura)*

BURNS, R. K. Ph.D. — Bridgewater Coll., BRIDGEWATER, Va. 22812, U.S.A. •

BURNSIDE, Miss M. B. Ph.D. — Biol. Lab., Harvard Univ., CAMBRIDGE, Mass. 02138, U.S.A.

a Incorporation of tritiated polysaccharide precursors into the cell surface of amoebae grown in suspension culture as studied by biochemical techniques and electron microscopic radioautography. *Dictyostelium discoideum (Acrasiales)*

b Investigation of the role of microtubules in the maintenance and production of cell shape in embryonic columnar epithelia. *Taricha torosa (Urodela), Gallus domesticus (Aves)*

BURTON, A. L. M.D., Prof. — Dept. of Anat., The Univ. of Texas Med. School at San Antonio, 7703 Floyd Curl Drive, SAN ANTONIO, Tex. 78229, U.S.A.

a Development of mast cells in connective tissue of embryonic skin. *Mus norvegicus albinus (Rodentia)*

BUSS, E. G. Ph.D., Prof. — Dept. of Poultry Sci., The Pennsylvania State Univ., 105 Weaver Bldg., UNIVERSITY PARK, Pa. 16802, U.S.A.

BUTLER, E. G. Ph.D., D.Sc., Prof. (Emer.) — Dept. of Biol., Princeton Univ., PRINCETON, N.J. 08540, U.S.A. •

a Study of the mechanics of the formation of the regeneration blastema; the influence of nerves on blastema formation; regression in nerveless non-regenerating limbs. *Ambystoma punctatum, A. opacum (Urodela)*

b Effects of ultraviolet radiation on limb development and supernumerary limb regeneration. *(Urodela)*

c Problems of polarity in the limb; regeneration after reversal of the proximo-distal axis. *(Urodela)*

d Study of epidermal hyperplasia. *(Urodela; Mammalia)*
e Spinal cord reconstitution after ablation. *(Urodela)*

BUTLER, H. M.D., B.Chir. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Sask., Canada
a Reproductive cycle, implantation, placentation and early embryology. *Galago senegalensis senegalensis (Lemuroidea, Primates)*

BUTLER, W. L. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Mechanism of phytochrome action in development. *(Plantae)*
b Photobiology of development. *(Algae)*

BUTROS, J. M. Ph.D., Prof. — Biol. Dept., American Univ. of Beirut, BEIRUT, Lebanon •
a Promoting action of RNA from embryonic organs on differentiation of fragments of early blastoderms. *Gallus domesticus (Aves)*
b Entry and action of RNA on protein synthesis. *Lytechinus pictus (Echinoidea)*
c Action of stimulants and depressants on development of the heart primordium in vitro. *Gallus domesticus (Aves)*

BUTTERWORTH, F. M. Ph.D. — Dept. of Biol., Oakland Univ., ROCHESTER, Mich. 48063, U.S.A.
a The hormonal and genetic control of development of the adipose tissue on the cellular and biochemical level (microsurgical, transplantation, cytological and biochemical techniques). *Drosophila melanogaster (Diptera)*

BUTZEL, H. M., Jr. Ph.D., Prof. — Dept. of Biol. Sci., Union College, SCHENECTADY, N.Y. 12308, U.S.A.
a Developmental genetics of mating type. *Paramaecium aurelia (Ciliata)*
b Organelle development: study of the role of organelles in teratogenesis of single and double cells. *Paramaecium aurelia (Ciliata)*

BUZNIKOV, G. A. Dr.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a The role of neurotransmitters (acetylcholine, serotonin, catecholamines) in early embryogenesis. *Strongylocentrotus dröbachiensis, S. nudus, S. intermedius, Paracentrotus lividus, Arbacia lixula, Sphaerechinus granularis (Echinoidea), Rana temporaria, Bufo bufo (Anura)* (in collaboration with Mrs. L. N. MARKOVA)

BYCZKOWSKA (SMYK), Mrs. W. Dr. — Dept. of Comp. Anat., Jagellonian Univ., ul. Krupnicza 50, KRAKÓW, Poland
a Electron microscopic studies of spermiogenesis. *Tetrodontophora bielanensis (Collembola)*

BYLINA (KUŃSKA), Mrs. A. mgr.Sci. — Dept. of Histol. and Embryol., Fac. of Vet. Med., Warsaw Agricult. Univ., Grochowska 272, WARSZAWA, Poland
a Histochemical studies on differentiation of metanephros. *Sus domesticus (Artiodactyla)*

BYTINSKI-SALZ, H. Ph.D., Prof. — Dept. of Zool., Tel-Aviv Univ., 155 Herzl St., TEL-AVIV, Israel
a Hormonal influences on melanophore behavior in tadpoles. *Rana* spec., *Pelobates* spec. *(Anura)*
b Species specificity of different larvae tested by xenoplastic transplantation of hypophysis. *Pelobates* spec., *Xenopus* spec., *Bufo* spec., *Rana* spec., *Bombina* spec., *Hyla* spec. *(Anura), Pleurodeles* spec., *Triton* spec., *Ambystoma* spec. *(Urodela)*

CAHN, R. D. Dr. — Dept. of Zool., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

CAIRNS, J. M. Ph.D. — Springville Labs., Roswell Park Mem. Inst., SPRINGVILLE, N.Y. 14141, U.S.A.

CALLEBAUT, M. E. M.D. — Lab. of Anat. and Embryol., State Univ. Center, Groenenborgerlaan 171, ANTWERPEN, Belgium
a Early development. *Gallus domesticus, Coturnix coturnix (Aves)*
b ^{3}H-Uridine and ^{3}H-thymidine incorporation in germ cells. *Coturnix coturnix (Aves)*

CAMBAR, R. Dr., Prof. — Lab. de Biol. Anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, 33 TALENCE, France
a Etude descriptive et expérimentale de la morphogenèse du mésonéphros. *Rana* spec., *Alytes* spec., *Discoglossus* spec., *Xenopus* spec. *(Anura)*
b Etude expérimentale de la morphogenèse du tube digestif et des glandes annexes. *(Anura)*
c Involution ou transformation de l'appareil excréteur pendant la métamorphose. *(Anura)*
d Rapports entre l'appareil génital et l'appareil excréteur. *(Anura)*
e Recherches descriptives sur le développement. *Gambusia* spec. *(Teleostei)*
f Ultrastructure du pronéphros et du mésonéphros. *(Anura)*
g Différenciation sexuelle. *(Anura)*

CAMENZIND, R. Dr.sc.nat. — Dept. of Zool., Swiss Federal Inst. of Technol., Universitätstr. 2, 8006 ZÜRICH, Switzerland
a Morphology, physiology and cytology of paedogenetic-bisexual reproduction cycle. *Heteropeza pygmaea (= Oligarces paradoxus), Tekomyia populi; Mycophila* spec. *(Itonididae = Cecidomyiidae, Diptera)*

CAMERON, I L. Ph.D., Prof. — Dept. of Anat., The Univ. of Texas Med. School at San Antonio, 7703 Floyd Curl Drive, SAN ANTONIO, Tex. 78229, U.S.A.
a Synchronous cell differentiation. *Tetrahymena vorax (Ciliata)*
b Cell proliferation and differentiation. *Gallus gallus (Aves)*
c Cell homing. *Gallus gallus (Aves)*
d Patterns in development. *Gallus gallus (Aves)*

CAMOSSO, Miss M. E. Sc.D. — Inst. of Human Anat., Fac. of Med., Univ. of Bari, Policlinico, 70124 BARI, Italy
a Analysis of the morphogenesis of the wing. *Gallus domesticus (Aves)*
b Nerve patterns in experimentally duplicated limbs. *Gallus domesticus (Aves)*

CAMPBELL (GIBSON), Mrs. J. A. B.Sc.(Hons.) — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K..
a Studies of the formation of cell adhesions, using cultured cell lines and embryonic cells, in reaggregation and dispersal experiments.

CAMPANTICO, E. Dr. — Inst. of exp. Embryol., Univ. of Turin, Via Giolitti 34, 10123 TORINO, Italy
a Induction by prolactin of thyroid activation in larvae at advanced metamorphic stages. *Bufo bufo (Anura)* (in collaboration with R. BRUNO, M. OLIVERO, M. T. RINAUDO, C. GIUNTA and A. GUARDABASSI)

CAMPBELL, J. C. Ph.D. — M.R.C. Epigenet. Research Group, Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.
a Antigenic studies of lens regeneration. *Xenopus laevis, Triturus alpestris (Amphibia)* (in collaboration with D. E. S. TRUMAN)
b Regulatory mechanisms in lens regeneration. *Xenopus laevis (Anura)*
c Metabolism (immunochemistry) and regulatory mechanisms in lens development. *Xenopus laevis (Anura), Gallus domesticus (Aves)* (in collaboration with Mrs. R. M. CLAYTON and D. E. S. TRUMAN)
d Studies of mutants affecting the eye and lens. *Mus musculus (Rodentia)* (in collaboration with Mrs. R. M. CLAYTON)
e Immunochemical studies of retina and eye-cup. *(Amphibia)* (in collaboration with Mrs. R. M. CLAYTON)

CAMPENHOUT, E. van Dr., Prof. — Inst. d'Anat., Univ. de Louvain, 12 Minderbroedersstr., LOUVAIN, Belgium

CANDIOLLO, L. Lib.Doc. — Ist. di Anat. Umana Norm. della Univ., Fac. Med. e Chir., Corso M.D'Azeglio 52, 10126 TORINO, Italy

CANNATA, F. — Cat. di Istol. ed Embriol., Fac. di Sci., Univ. di Messina, Via dei Verdi 75, 98100 MESSINA, Italy
a Structural and cytochemical aspects of the nucleolar apparatus. *Astropecten aurantiacus (Asteroidea), Ophiomyxa pentagona (Ophiuroidea), Stichopus regalis (Holothuroidea), Doricidaris papillata (Echinoidea)*
b Formation of yolk globules. *Astropecten aurantiacus (Asteroidea), Ophiomyxa pentagona (Ophiuroidea), Stichopus regalis (Holothuroidea), Dorocidaris papillata (Echinoidea)*

CANTELL, C.-E. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Larval development. *(Heteronemertini, Nemertea)*

CANTINO, D. M.D. — Dept. of Anat., Univ. of Turin, Corso M.D'Azeglio 52, 10126 TORINO, Italy
a The development of Auerbach's and Meissner's plexus (silver staining, histochemistry, electron microscopy). *Oryctolagus cuniculus (Lagomorpha), Cavia cobaya, Rattus norvegicus (Rodentia)*
b The development of Remak's ganglion (histochemistry and electron microscopy of developing neuroblasts and synapses.) *Gallus domesticus (Aves)*
c The development of sympathetic neurons and neural connections in the autonomic nervous system (electron microscopy, tracer studies). *Gallus domesticus (Aves)*

CAPANNA, E. Dott.Sci.Nat. — Ist. di Anat. Comp. "Battista Grassi", Fac. di Sci., Univ. di Roma, Via A. Borelli 50, 00161 ROMA, Italy

ČAPKOVÁ (HRUBÁ), Mrs. A. M.D. — Embryol. Lab., Inst. for the Care of Mother and Child, nábr. K. Marxe 157, PRAHA-Podoli, Czechoslovakia

CAPUANO, G. — Lab. d'Anat. Norm., Fac. Mixte de Méd. et de Pharm. de Rouen, 41 rue St. Girardin, 76 ROUEN, France

CARELL, E. F. Ph.D. — Dept. of Biol., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.
a Effect of light and chemicals on the development of chloroplasts. *Euglena gracilis (Euglenophyceae)*

CARINCI, P. M.D., Prof. — Inst. of Histol. and Gen. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italy

CARLSON, B. M. M.D., Ph.D. — Dept. of Anat., Med. School, Univ. of Michigan, 4565 East Med. Bldg., ANN ARBOR, Mich. 48104, U.S.A.

CARMONA DE UZCATEGUI, Mrs. M. L. — Cat. de Embriol., Fac. de Med., Univ. de Los Andes, MÉRIDA, Venezuela

CARR, D. H. Ph.D., Prof. — Dept. of Anat., Fac. of Med., McMaster Univ., HAMILTON, Ont., Canada
a Chromosome abnormalities and development. *Homo sapiens (Primates)*
CASPARI, E. W. Ph.D., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A.
CASSAGNE-MÉJEAN, Mrs. F. Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Montpellier, Place Eugène Bataillon, 34 MONTPELLIER, France
a Embryonic and post-embryonic development and metamorphosis. *Arrenurus* spec. *(Hydrachnellae, Acarina, Arachnida)*
CASTAÑEDA, M. M.D. — Dept. of Developm. Biol., Div. of Biol., Calif. Inst. of Technol., PASADENA, Calif. 91109, U.S.A.
CASTELLANI (CERESA), Mrs. L. Dr.biol.sci. — Cat. di Embriol. e Morfol. Sperim., Univ. di Milano, Via Celoria 10, MILANO, Italy
CASTIGLI (PITTOTTI), Mrs. M. Dott., Prof. — Ist. di Zool. Gen., Fac. di Sci. Agraria, Univ. di Perugia, S. Pietro, PERUGIA, Italy
CASTON, J. D. Ph.D. — Dept. of Anat., Developm. Biol. Center, Western Reserve Univ. School of Med., 2127 Cornell Rd., CLEVELAND, Ohio 44106, U.S.A.
a Nucleic acids and protein synthesis during development (ribosomes). *Rana pipiens, Xenopus laevis (Anura)*
CASTRO-ROMERO, J. M. Ph.D., M.D., Prof. — Dept. de Anat. y Embriol., Fac. de Med., Univ. de Salamanca, SALAMANCA, Spain
CATHER, J. N. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
a The differentiation of the shell gland. *Ilyanassa obsoleta* and other *Gastropoda* and *Lamellibranchia (Mollusca)*
b Cellular interactions. *(Annelida, Mollusca* and other *Spiralia)*
CAUNA, N. M.D., D.Sc., Prof. — Dept. of Anat. and Cell Biol., School of Med., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.
a Development of peripheral receptor organs (neurohistological, histochemical and electron-microscopical studies). *Homo sapiens* and other spp. *(Mammalia)*
CAUNTER (DEVIS), Mrs. R. J. M.Sc. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, S.Africa
a An electron microscopic study of development. *(Ascidiae)*
b Electron microscopic study. *Convoluta macnaei (Turbellaria)*
CAVALLIN (THOMAS), Mrs. M. Dr.Biol.anim. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France
a Recherches descriptives et expérimentales sur la morphogenèse de l'appareil génital. *Carausius* spec. *(Cheleutoptera)*
CAVE, M. D. Ph.D. — Dept. of Anat. and Cell Biol., School of Med., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.
a The origin and function of extrachromosal deoxyribonucleic acid during oogenesis and early stages of embryogenesis. *Gryllus domesticus (Orthoptera)*
b The protein components of giant polytene chromosomes. *Chironomus thummi (Diptera)*
CAZAUX, Cl. Dr.Biol.Anim. — Inst. de Biol. Marine, Fac. des Sci., Univ. de Bordeaux, 2 rue du Prof. Jolyet, 33 ARCACHON, France
a Larval development from egg to metamorphosis and beyond (artificial fertilization, rearing in the laboratory). *(Polychaeta)*
CEBRA, J. J. Ph.D., Prof. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.
a Differentiation of lymphoid cells with respect to variety of their immunoglobulin product (polymorphic form of immunoglobulin and specificity of antibody). *Oryctolagus cuniculus (Lagomorpha), Cavia porcellus (Rodentia), Homo sapiens (Primates)*
CECCARINI, C. Ph.D. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
a Ribosomal protein synthesis, ribosomes and other subcellular components. *Dictyostelium purpureum (Acrasiales)*
CEDARD (WILLSTAETTER), Mrs. L. M.D., Ph.D. — Lab. de Chimie Hormonale, Maternité de Port-Royal, 121 Bd. de Port-Royal, PARIS XIVe, France
a Action of gonadotropins on steroidogenesis and glycogenolysis in placenta perfused in vitro; demonstration of the role of cyclic 3'5'AMP as intercellular mediator. *Homo sapiens (Primates)*
b Biosynthesis of steroids and cholesterol in organotypic cultures of immature gonads; influence of HCG on steroidogenesis. *Gallus domesticus (Aves)*
CENTER, Mrs. E. M. Ph.D. — Dept. of Biol., Stanford Univ., STANFORD, Calif. 94305, U.S.A.
a Developmental genetics of mutations involving abnormal development of limbs, tail, and neural tube. *Mus musculus (Rodentia)*
CERBELLE, J. C. — Lab. de Physiol. Génér., Fac. des Sci. de Bordeaux, Avenue des Facultés, 33 TALENCE, France

a Development of neuromuscular system (action potentials; establishment of first reflex arc). *Rattus* spec., *Cavia* spec. *(Rodentia), Oryctolagus* spec. *(Lagomorpha)*

CERIMELE, D. M.D. — Dept. of Dermatol., School of Med., Univ. of Pavia, Policlinico S. Matteo, 27100 PAVIA, Italy

a Quantitative and qualitative histochemical changes in skin during fetal life. *Homo sapiens (Primates)*

CHAKKO, T. V. M.Sc. — Dept. of Zool., Fac. of Sci., M.S. Univ. of Baroda, BARODA-2, India

a Tail regeneration in the adult. *Hemidactylus flaviviridis (Lacertilia)*

CHAKRAVARTY, A. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W. Bengal, India

CHALLICE, C. E. Ph.D., Prof. — Dept. of Physics, Fac. of Arts & Sci. Univ. of Calgary, CALGARY 44, Alta., Canada

a Electron microscopy of the heart in development. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

CHALLIER, J.-C. Dr.3e Cycle — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôp. Saint-Antoine, 184, rue du Faubourg Saint-Antoine, PARIS 12e, France

a Ultrastructure de la membrane amniotique. *(Mammalia)*

CHALOUPKA, Z. MUDr. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia

CHAMBERLAIN, J. G. Ph.D. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.

a Pathogenesis of experimentally induced congenital hydrocephalus: 6-aminonicotinamide injected during pregnancy. *Rattus rattus (Rodentia)*

b Intraamniotic injections of metabolites and antimetabolites as replacement therapy during teratogenesis. *Rattus rattus (Rodentia)*

c pO_2 in embryo brains predestined to be hydrocephalic. *Rattus rattus (Rodentia)*

CHAMBOLLE, P. Dr.en Biol.Anim. — Lab. de Biol. Anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, 33 TALENCE, France

a Etude de la gestation. *Gambusia* spec. *(Poeciliidae, Teleostei)*

b Etude du développement in vitro. *Gambusia* spec. *(Poeciliidae, Teleostei)*

c Etude de l'ultrastructure des oeufs. *Gambusia* spec. *(Poeciliidae, Teleostei)*

CHANCONIE (MAURY), Mrs. M. Dr.3e Cycle — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France

a Studies on respiration during early stages of egg development. *Salmo irideus, S. fario (Teleostei)* (in collaboration with Ch. DEVILLERS)

b Relationships between respiration and oxidative phosphorylations as shown by the action of 2-4 dinitrophenol and some inhibitors of respiration in early stages of egg development. *Salmo irideus, S. fario (Teleostei)* (in collaboration with Ch. DEVILLERS)

CHANDEBOIS, Miss R. Dr., Prof. — Lab. de Morphogénét. Anim., Fac. des Sci., 1 Place Victor Hugo, 13 MARSEILLE 3, France

a Analysis of the activity of the undifferentiated material in normal and regenerating animals (electron microscopy, tissue culture, irradiation). *Dugesia subtentaculata, D. gonocephala (Turbellaria)*

b Analysis of cell equilibria between the two cell types of the undifferentiated tissue and of the equilibria between this undifferentiated tissue and the differentiated cells. *Dugesia subtentaculata, D. gonocephala (Turbellaria)*

CHANG, C. Y. Ph.D. — Inst. of Zool., Acad. Sinica, Haitien, PEKING (53), China (via Hong-Kong)

CHANTURISHVILI, P. S. Dr.biol.sci., Prof. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

CHARNIAUX (COTTON), Mrs. H. Dr.ès Sci., Prof. — Lab. d'Evol., Fac. des Sci. de Paris, 105 Bd. Raspail, 75 PARIS 6, France •
— Lab. de Génét. Evol. et de Biométrie, C.N.R.S., 91 GIF-sur-YVETTE, France

a Contrôle hormonal de la différenciation sexuelle; la glande androgène. *(Malocostraca, Crustacea)*

b Contrôle endocrine de l'hermaphrodisme proterandrique. *Pandalus borealis, Lysmata seticaudata (Decapoda natantia, Crustacea)*

c Recherches sur l'autodifférenciation ovarienne. *(Malacostraca, Crustacea)* (en collaboration avec Mrs. J. BERREUR (BONNENFANT) et Mrs. M. C. FRIED (MONTAUFIER))

d Recherches sur la sécrétion d'hormone femelle par le testicule après inversion expérimentale en ovaire. *(Talitridae, Amphipoda, Crustacea)*

e Recherches sur la nature chimique de l'hormone androgène. *Carcinus maenas (Decapoda, Crustacea)*

CHASE, H. B. Ph.D., Prof. — Div. of Biol. & Med. Sci., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A. •

a Developmental genetics of hair growth phases, using mutants hairless (hr), Rex (Re), and satin (sa). *Mus musculus (Rodentia)*

CHATTERJEE, S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India

CHAUDHRY, H. S. D.Phil., Prof. — Dept. of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India

a Studies on neuroendocrines and chemosterilants in relation to development. *(Insecta)*

b Uptake, metabolism and histopathological effects of radioactive phosphorus (P^{32}) in developing stages. Freshwater species *(Teleostei)*

CHAYTOR, D. E. B. Ph.D., Prof. — Dept. of Zool., Njala Univ. Coll., Private Mail Bag, FREETOWN, Sierra Leone, W.Africa

a Embryonic development of the gonad. *Gallus domesticus (Aves)*

CHEN, P. K. Ph.D. — Dept. of Biol., Georgetown Univ., 37th & O. St. N.W., WASHINGTON, D.C. 20007, U.S.A.

a Developmental pathology and teratogenesis. *Datura meteloides, Nicotiana tabacum (Solanaceae)*

b Developmental physiology. *Datura meteloides, Lycopersicon esculentum (Solanaceae)*

CHEN, P. S. Dr.Phil., Prof. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH-8006, ZÜRICH, Switzerland •

CHENEY, R. H. Sc.D., Prof. (Emer.) — Brooklyn Botanic Garden, 1000 Washington Ave., NEW YORK, Brooklyn, N.Y. 11225, U.S.A.

a Retardation effect of dimethylated xanthines on development. *Arbacia punctulata (Echinoidea)*

b Theophylline, theobromine, and caffeine effects on fecundity and development. *Rattus norvegicus (Rodentia)*

c Effect of di- and trimethylated xanthines on root tip growth. *Allium* spec. *(Liliaceae)*

d Effect of methylated xanthines on the oxygen consumption of the fertilized egg and early embryology. *Arbacia punctulata (Echinoidea)*

e Effect of x-ray and ultra-violet irradiation on development of methylated xanthine-treated eggs. *Arbacia punctulata (Echinoidea)*

f Effect of caffeine on development. *Rana pipiens (Anura)*

g Developmental effects of chemical inhibitors of protein synthesis. *Arbacia punctulata (Echinoidea)*

CHENG, Th. C. Ph.D., Prof. — Dept. of Zool., Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.

CHEVALLIER, A. D. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53 38 GRENOBLE, France

a Differentiation, localization and migration of neural crest cells by radioautographic analysis. *Gallus domesticus (Aves)*

b The early differentiation of the suprarenal gland in chorioallantoic grafts. *Gallus domesticus (Aves)*

CHEVREAU, J. P. Dr.en Méd., Prof. — Lab. d'Histol.-Embryol. B., Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France

a Postnatal development of cerebral cortex. *Lepus cuniculus (Lagomorpha)*

b Myelinization of brain. *Lepus cuniculus (Lagomorpha)*

CHÈVREMONT, M. J. J. Dr.hon.c., Prof. — Inst. d'Histol., Univ. de Liège, 20 rue de Pitteurs, LIÈGE, Belgium

CHI, Miss YEA-YUAN B.Sc. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Effect of 3',5'-adenosine monophosphate (cyclic AMP) on ion transport. *Dictyostelium discoideum (Acrasiales)* (in collaboration with D. W. FRANCIS)

CHIARODO, A. J. Ph.D. — Dept. of Biol., Georgetown Univ., 37th & O. St. N.W., WASHINGTON, D.C. 20007, U.S.A.

a Neuroembryology (experimental morphology). *Sarcophaga bullata (Diptera)*

CHIBON, P. Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

a Nuclear labelling of embryonic cells (autoradiography). *Pleurodeles waltlii, Triturus alpestris (Urodela)*

b Morphogenetic abilities and differentiation of neural crest cells. *Pleurodeles waltlii, Triturus alpestris (Urodela)*

c Origin and differentiation of teeth. *(Amphibia)*

d Genetic and embryonic effects of high nuclear labelling. *(Amphibia)*

CHIEFFI, G. M.D., Prof. — Lab. di Anat. Comp., Ist. di Istol. ed Embriol., Univ. di Napoli, Via Mezzocannone 8, 80134 NAPOLI, Italy •

CHINO, H. D.Sc., Prof. — Biol. Inst., Coll. of Gen. Educ., Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

CHITNIS, P. S. Ph.D. — Cell Research Lab., Dept. of Zool., Nowrosjee Wadia Coll., POONA-1, India

a A histochemical (qualitative and quantitative) study of phospholipids and phosphatases in the larval stages. *Chrysomia rufifacies (Diptera)* (in collaboration with D. N. KAMAT, Kolhapur)

b Intra vitam studies on the development and metamorphosis of Malpighian tubules. *Chrysomia rufifacies (Diptera)*
c Succinoxidase and succinodehydrogenase system in larva, pupa and imago (histochemical techniques). *Aedes egypti, Chrysomia rufifacies (Diptera)*

CHOUARD, C. H. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

CHRISPEELS, M. J. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Biochemical processes in development: mechanism of protein secretion and cell wall formation. *(Plantae)*

CHRIST, B. Dr.med. — Anat. Inst. der Univ., Kreuzbergring 36, 34 GÖTTINGEN, W.Germany
a Experimente zur Entstehung der Segmentierung der Achsialorgane. *Gallus gallus (Aves)*
b Experimente zur Chondrogenese. *Gallus gallus (Aves)*

CHUANG HSIAO HUI Dr.rer.nat.habil. — Lab. of Developm. Physiol., Inst. for Exper. Biol., Acad. Sinica, 320 Yo Yang Rd., SHANGHAI, People's Republ. of China •

CHURCH, N. S. Ph.D. — Research Station, Research Branch, Canada Agriculture, Univ. Campus, SASKATOON, Sask., Canada
a Endocrinology of hypermetamorphosis. *Lytta nuttalli (Coleoptera)*
b Embryology. *Lytta viridana (Coleoptera)*

CHURCH, R. R. Ph.D., Prof. — Dept. of Biol. and Morphol. Sci., Univ. of Calgary, CALGARY 44, Alta., Canada
a Study of messenger RNA synthesis in fetal and regenerating liver by RNA/DNA molecular hybridization. *Mus musculus (Rodentia)*
b Site of hormone action on DNA transcription and RNA translation at various stages of development. *Oryctolagus cuniculus (Lagomorpha)*

CIGADA (LEONARDI), Mrs. M. Dott.Sci.Biol. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italy •

ČIHÁK, R. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a Prenatal development of muscles. *Homo sapiens (Primates)*

CLAIRAMBAULT, P. Dr.ès Sci. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France
a Morphological and experimental studies of brain development. *Discoglossus pictus, Rana pipiens, Bufo regularis, Rhacophorus* spec., *Nectophrynoides occidentalis (Anura), Pleurodeles waltlii (Urodela)*

CLARK (LATTO), Mrs. J. C. B.Sc. — Dept. of Zool., The University, GLASGOW W2, Scotland, U.K.
a Metabolic activity of primordial germ cells. *Xenopus laevis (Anura)*

CLAVERT, J. M. J. Dr.ès Sci., Prof. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France •
a Recherches sur le déterminisme de la symétrie bilatérale. *(Pisces; Reptilia; Aves)*
b Chimiotératogenèse (cortisone, antimitotiques). *(Aves; Mammalia)*

CLAXTON, J. H. Ph.D. — Dept. of Agric. Biol., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia
a Developmental analysis of bristle pattern characteristics using X-ray induced genetic mosaics. *Drosophila melanogaster (Diptera)*

CLAYTON (FREEDMAN), Mrs. R. M. M.A. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K. •
a Metabolic and immunochemical studies of regulation and structure of lens proteins and lens development. *Xenopus laevis (Anura), Gallus domesticus (Aves)* (in collaboration with J. C. CAMPBELL and D. E. S. TRUMAN)
b Immunochemical studies of retina and eye cup. *Xenopus laevis (Anura)* (in collaboration with J. C. CAMPBELL)
c Studies of mutants affecting the eye and lens. *Mus musculus (Rodentia)* (in collaboration with J. C. CAMPBELL)

CLEFFMANN, G. Dr., Prof. — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, W.Germany
a Synthesis of macromolecular compounds in relation to the cell cycle. *Tetrahymena pyriformis (Ciliata)*

CLEGG, E. J. M.D., Ph.D. — Dept. of Human Biol. and Anat., Univ. of Sheffield, SHEFFIELD, England
a Effect of hypoxia on somatic and reproductive growth. *(Mammalia)*
b Growth patterns in the accessory reproductive organs. *(Mammalia)*
c Effects of cadmium salts on the reproductive tract. *(Mammalia)*

CLEGG, J. S. Ph.D., Prof. — Dept. of Biol., Univ. of Miami, CORAL GABLES, Fla. 33124, U.S.A.
a Biochemical and physiological studies on cryptobiosis in the embryo (major emphasis on metabolism of trehalose, glycerol and other carbohydrates). *Artemia salina (Anostraca)*

b Protein and nucleic acid metabolism during embryonic development (major emphasis on in vitro protein synthesizing system, analysis of polysome formation and breakdown and synthesis of various RNA species). *Artemia salina (Anostraca)*

CLEMENT, A. C. Ph.D., Prof. — Dept. of Biol., Emory Univ., ATLANTA, Ga. 30322, U.S.A.

a Experimental analysis of early embryonic determination. *Ilyanassa obsoleta (Gastropoda)*

b Cytochemical and physiological studies of early development. *Ilyanassa obsoleta (Gastropoda)*

CLERMONT, Y. Ph.D. Prof. — Dept. of Anat., McGill Univ., MONTREAL 2, Que., Canada

a Growth and renewal of the spermatogonial population in prepuberal animals. *Rattus norvegicus (Rodentia)*

CLEWE, Th. H. M.D. — Delta Region. Primate Research Center, Tulane Univ., COVINGTON, La. 70433, U.S.A.

a Physiology of gamete and zygote transport in the female. *(Mammalia)*

CLIVE, D. Ph.D. — Dept. of Biol., Georgetown Univ., 37th & O. St. N.W., WASHINGTON, D.C. 20007, U.S.A.

a Regulation of gene activity during embryogenesis by "adult" chromosomal RNA protein complex. *Rana pipiens (Anura)*

b Chromosome replication in nuclear transplant embryos. *Rana pipiens (Anura)*

CLUTTER (SUSSEX), Mrs. M. E. Ph.D. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a Histodifferentiation in tissue cultures. *Nicotiana tabacum (Solanaceae)*

COALSON, R. E. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Oklahoma, 801 NE 13th St., OKLAHOMA-City, Okla. 73104, U.S.A.

a Studies on insulin in the developing pancreas. *Gallus domesticus, Columba livia (Aves), Rattus norvegicus, Cavia cobaya (Rodentia)*

COCK, A. C. Ph.D. — Dept. of Zool., Univ. of Southampton, SOUTHAMPTON SO9 5NH, England

a Developmental genetics of body shape and size. *Artemia salina (Anostraca, Crustacea), Gallus gallus (Aves)*

COETZEE, Miss F. C. B.Sc. — Dept. of Zool., Univ. of Pretoria, Hillcrest, PRETORIA, S.Africa

COHEN, B. B. B.Sc.,Ph.D. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.

a Protein synthesis in reticulocytes. *Oryctolagus cuniculus (Lagomorpha)*

COHEN, M. H. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Ordening in time and space of events in developing systems

COHEN, Ph. P. Ph.D., M.D., Prof. — Dept. of Physiol. Chem., Univ. of Wisconsin, 1215 Linden Drive, MADISON, Wis. 53706, U.S.A.

a Biochemical aspects of differentiation in liver during metamorphosis (enzyme changes and induction; RNA, DNA and histone changes; biochemical mechanism of thyroxine action as an inducer). *Rana catesbeiana (Anura)*

COHEN, S. Ph.D., Prof. — Dept. of Biochem., School of Med., Vanderbilt Univ., NASHVILLE, Tenn. 37203, U.S.A.

COHN, S. A. Ph.D., Prof. — Dept. of Anat., Coll. of Basic Med. Sci., Med. Units, Univ. of Tennessee, 62 S. Dunlap St., MEMPHIS, Tenn. 38103, U.S.A.

a The development of glands of ectodermal origin. *Mus musculus (Rodentia)*

b Studies of tooth development. *Mus musculus (Rodentia)*

c Histologic and histochemical studies of the periodontium. *Mus musculus (Rodentia)*

COLEMAN, J. R. Ph.D., Prof. — Div. of Biol. and Med. Sci., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.

a Differentiation of embryo cells in culture, particularly skeletal muscle, cartilage and retinal pigment cells: synthesis of specific proteins (myosin, collagen), glycosaminoglycans (chondroitin sulfate), synthesis and processing of RNA, and the effects of nucleoside analogs on cellular differentiation. *Gallus domesticus (Aves)*

COLEMAN, R. D. D.D.S., Prof. — Dept. of Dental Anat., School of Dentistry, Univ. of California Med. Center, 3rd & Parnassus Aves., SAN FRANCISCO, Calif. 94122, U.S.A.

a The possible role of sulfated mucopolysaccharides in normal and cleft palate development by employing radioactive sulfur (palatal defects induced by a transitory maternal deficiency of folic acid). *Rattus norvegicus (Rodentia)*

b A study of the uptake of tritiated thymidine in normal and cleft palate development (palatal defects induced by a transitory maternal deficiency of folic acid). *Rattus norvegicus (Rodentia)*

c Oro-facial abnormalities induced by the folinic acid antagonist pyrimethamine. *(Mammalia)*

COLLE (VANDEVELDE), Mrs. A. M.D. — Lab. of Anat., Fac. of Med., Univ. of Gent, Ledeganckstr. 35, GENT, Belgium

COLLENOT, A. Dr.ès Sci. — Lab. d'Embryol., Fac. des Sci., 9 quai St. Bernard, 75 PARIS Ve, France •

COLLIER, J. R. Ph.D., Prof. — Dept. of Biol., Brooklyn Coll., Bedford Ave. & Ave. H, NEW YORK, Brooklyn, N.Y. 11210, U.S.A. •

a Nucleic acid and protein synthesis of the embryo, with particular interest in the transcription and regulation of the genome during embryogenesis: 1. RNA and protein synthesis during early development; 2. the role of DNA-dependent RNA synthesis in embryogenesis. *Ilyanassa obsoleta (Gastropoda)*

COLLIN, J.-P. D.E.S. — Lab. de Biol. Anim., 1 Av. Vercingétorix, 63 CLERMONT-FERRAND, France

a Développement de l'épiphyse (microscopie électronique). *(Reptilia; Aves; Mammalia)*

COLLIN, W. K. Ph.D. — School of Public Health, Univ. of California, LOS ANGELES, Calif. 90024, U.S.A.

a Electron microscopy of developmental stages. *Hymenolepis citelli (Cestoda), Brughia malayi (Nematoda)*

COLLINI, Miss R. Dr. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO Italy

COLLINS, M. F. Ph.D. — Dept. of Zool., The Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.

a Cellular surface properties and morphogenetic movements. *Gallus domesticus (Aves)*

COLOMBO, G. Dr.Biol., Prof. — Ist. di Zool., Univ. di Ferrara, Via Previati 24, 44100 FERRARA, Italy •

COLOMBO, L. Dr.biol.sci. — Ist. di Biol. Anim., Univ. di Padova, Via Loredan 10, 35100 PADOVA, Italy

a Steroid hormone biosynthesis during sexual differentiation. *Sparus auratus (Teleostei)*

COLWIN, A. L. Ph.D., Prof. — Dept. of Biol., Queens Coll. of the City Univ. of New York, NEW YORK, Flushing, N.Y. 11367, U.S.A. •

a Fertilization: sperm-egg association and zygote formation; cell contact and adhesion; fusion of plasma membranes; egg envelopes; lytic changes; cortical changes; spermblastomere association (living material and electron microscope studies). *(Enteropneusta; Echinodermata; Annelida,* etc.) (in collaboration with Mrs. L. H. COLWIN)

COLWIN, Mrs. L. HUNTER Ph.D., Prof. — Dept. of Biol., Queens Coll. of the City Univ. of New York, NEW YORK, Flushing, N.Y. 11367, U.S.A. •

a Fertilization: sperm-egg association and zygote formation; cell contact and adhesion; fusion of plasma membranes; egg envelopes; lytic changes; cortical changes; spermblastomere association (living material and electron microscope studies). *(Enteropneusta; Echinodermata; Annelida,* etc.) (in collaboration with A. L. COLWIN)

COMOGLIO, P. M.D. — Dept. of Anat., Univ. of Turin, Corso M.D'Azeglio 52, 10126 TORINO, Italy

a Histochemical and ultrastructural investigations of thymus and lymphoid organs during development in vivo and in vitro

CONAN, G. Y. Lic.ès Sci. — Lab. de Biol. Invert. Marins, Museum Natl. d'Hist. Nat. Paris, 57 rue Cuvier, PARIS Ve, France

a Descriptive and experimental embryology: morphogenesis. *Sagartia troglodytes* and other spp. *(Anthozoa)*

CONKLIN, J. L. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Michigan, East Med. Bldg., ANN ARBOR, Mich. 48104, U.S.A.

CONTE, G. M.D. — Ist. di Anat. e Istoembriol., Univ. di Pisa, Via Roma 55, 56100 PISA, Italy

a Development of the heart. *Oryctolagus cuniculus (Lagomorpha), Homo sapiens (Primates)*

b Experimental morphology of the developing heart. *Gallus domesticus (Aves), Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*

CONTI, G. M.D., Prof. — Inst. of Histol. and Gen. Embryol., Univ. - Pérolles, 1700 FRIBOURG, Switzerland
(no embryological work in progress)

CORLISS, C. E. Ph.D., Prof. — Dept. of Anat., Coll. of Basic Med. Sci., Med. Units, Univ. of Tennessee, 62 S. Dunlap St., MEMPHIS, Tenn. 38103, U.S.A.

a Radioautographic studies of nuclear migration in neural epithelium of normal and teratogen-treated embryos. *Gallus domesticus (Aves)*

CORNEC, J. P. — Lab. de Morphogénét. Anim., Fac. des Sci., 1 Place Victor Hugo, 13 MARSEILLE 3, France

a Analyse des facteurs qui déterminent l'absence de régénération. *(Hirudinea, Annelida)*

CORNER, G. W. M.D., D.Sc., Prof. — American Philosoph. Soc., 104 South 5th St., PHILADELPHIA, Pa. 19106, U.S.A. •

CORNER, M. A. Ph.D. — Netherl. Central Inst. for Brain Research, IJdijk 28, AMSTERDAM-O., Netherlands

a Development of central nervous system function (electrophysiological techniques). *Gallus domesticus (Aves)*

1. Electroencephalogram and its relation to embryonic behaviour and neuronal activity patterns.

2. Chemical energy production and utilization during critical periods of functional development in the embryo.
3. Neurological bases for the maturation of spontaneous and reflex patterns of movement (brain stimulation and lesion studies; electrical activity in explants).

b Role of neural function in the embryonic development of the central nervous system (electrophysiology and neurohistology). *Xenopus laevis (Anura), Gallus domesticus (Aves)*

CORSIN, Miss J. Lic.ès Sci. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France

a Experimental studies on bone development in the skull. *Pleurodeles waltlii (Urodela)*

COSTA, M. M.D. — Dept. of Anat., Univ. of Turin, Corso M. D'Azeglio 52, 10126 TORINO, Italy

a Histochemical study of the development of Remak's nerve

COSTANZO, G. — Ist. Idrobiol. e Pescicoltura, Univ. di Messina, Via dei Verdi 75, 98100 MESSINA, Italy

a Ciclo vitale. *Lichomolgus* spp. *(Cyclopoida, Copepoda)*

COSTELLO, D. P. Ph.D., Prof. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C. 27514, U.S.A. •

COSTLOW, J. D., Jr. Ph.D. — Marine Lab., Duke Univ., BEAUFORT, N.C. 28516, and Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.

COULOMBRE, A. J. Ph.D. — Sect. on Exper. Embryol., Ophthalmol. Branch, Nat. Inst. of Neurol. Dis. and Stroke, Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A. •

a Growth and morphogenesis of the eye. *Gallus domesticus (Aves)* (in collaboration with Mrs. J. L. COULOMBRE)

b Development of the ocular skeleton. *Gallus domesticus (Aves)*

COULOMBRE (LACY), Mrs. J. L. B.S. — Sect. on Exper. Embryol., Ophthalmol. Branch, Natl. Inst. of Neurol. Dis. and Stroke, Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A.

a Growth and morphogenesis of the eye. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)

COULON (BUBLEX), Mrs. M. — Lab. de Biométrie, Sect. de Biol. Génér. et Appl., Fac. des Sci de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Etude de la restauration après irradiation X dans ses rapports avec le déterminisme de la mue. *Bombyx mori (Lepidoptera)*

COUNCE (NICKLAS), Mrs. S. J. Ph.D. — Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.

a Embryo culture in vitro; experimental analysis of embryogenesis; developmental genetics and physiology; cytogenetics, including puffing patterns at various developmental stages in different tissues. *Miastor* spec. *(Cecidomyidae, Diptera)*

b Genetics of egg structure (inheritance of egg pattern in different strains and species). *Drosophila hydei* and relatives, *D. melanogaster (Diptera)*

c Morphological and physiological effects of female-sterility genes. *Drosophila hydei* and relatives, *D. melanogaster (Diptera)*

COUPÉ, R. J. F. Lic.ès Sci. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, PARIS 5e, France

a Comportement et devenir — en culture in vitro — de cellules embryonnaires isolées. *Discoglossus pictus, Pleurodeles waltlii (Amphibia), Esox lucius (Teleostei)*

COUSINEAU, G. H. Ph.D. — Lab. de Biol. Moléc., Dépt. de Biol., Univ. de Montréal, C.P. 6128, MONTREAL 3, Que., Canada

a Study of the uptake and incorporation of labelled amino acids and pyrimidines into macromolecules of developing eggs, and the effect of actinomycin D. D_2O and hexahomoserine (with emphasis on "incorporation correction", i.e. the percent ratio of incorporation over uptake). *Arbacia punctulata, Strongylocentrotus purpuratus, Lytechinus pictus (Echinoidea)*

b Studies on bentonite as inhibitor of egg ribonuclease activity. *Arbacia punctulata, Strongylocentrotus purpuratus, Lytechinus pictus (Echinoidea)*

c Measurement of the amount of translatable RNA in the presence of bentonite, and characterization of the proteins produced in vitro. *Arbacia punctulata, Strongylocentrotus purpuratus, Lytechinus pictus (Echinoidea)*

COWAN, W. M. Ph.D., Prof. — Dept. of Anat., School of Med., Washington Univ., ST. LOUIS, Mo. 63110, U.S.A.

a Experimental studies of the development of the visual system. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

b The factors involved in the formation and maintenance of synaptic connections in the central nervous system. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

COWARD, S. J. Ph.D., Prof. — Dept. of Zool., Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.

a Dissociation and reaggregation of cells in culture. *Dugesia dorotocephala, Bdelloura candida (Turbellaria)*

b Physiological gradients and polarity control (kinetic studies of macromolecule precursors,. *Dugesia dorotocephala (Turbellaria)*
c Differential and sequential gene activation during regeneration (cell proliferation and enzymes of nucleotide metabolism). *Dugesia dorotocephala (Turbellaria)*
d Variations in enzyme activity during early development (thymidine kinase, uridine kinase, ribonucleotide reductase) correlated with changes in mitotic index and variation in cell cycle; special emphasis on primary induction. *Rana pipiens (Anura)*
e Chondrogenesis in vivo. *Mesocricetus auratus (Rodentia)*
f Relation of mitotic activity and DNA synthesis to differentiation. *Mesocricetus auratus (Rodentia)*
g Oogenesis in vivo. *Mesocricetus auratus (Rodentia)*
h Non-mitotic DNA synthesis. *Mesocricetus auratus (Rodentia)*

COZETTE, P. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France

CRACIUN, Mrs. O. L.Sc. — Cat. de Biol., Inst. Medico-Farmaceutic, Str. Pasteur 6, CLUJ, Rumania
a Affrontation d'organes embryonnaires in vitro. *Mus rattus (Rodentia)*
b Infuence de la vitamine B_{12} sur la régénération du foie. *Mus musculus (Rodentia)*

CRAIG, D. A. Ph.D. — Dept. of Entomol., Univ. of Alberta, EDMONTON, Alta., Canada
a Descriptive embryology. *Anopheles stephensi, Gymnopais* spec., *Neocurupira chiltoni, Simulium venustum (Nematocera, Diptera)*

CRAIG, G. B. Dr. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind. 46556, U.S.A.
a Pupal development and adult fertility as affected by deoxyriboside base analogues applied topically at onset of pupation. *(Nematocera, Diptera)* (in collaboration with J. A. M. BROWN)

CRAIGMYLE, M. B. L. M.D. — Dept. of Anat., Univ. Coll. of S. Wales & Monmouthshire, Newport Rd., CARDIFF, Wales, U.K.

CRAWFORD, R. B. Ph.D., Prof. — Dept. of Biol., Trinity Coll., HARTFORD, Conn. 06106, U.S.A.
a The relationship of the synthetic pathways of adenosine triphosphate to morphogenesis and differentiation. *Fundulus heteroclitus (Teleostei), Ambystoma maculatum (Urodela)*
b The kinetics of RNA synthesis during early embryogenesis, studied particularly in relation to energetics metabolism. *Fundulus heteroclitus (Teleostei), Ambystoma maculatum (Urodela)*
c Activation of hexokinase activity in embryos. *Ambystoma maculatum (Urodela)*
d Relationship of free amino acid pool to protein synthesis in embryos. *Fundulus heteroclitus (Teleostei), Ambystoma maculatum (Urodela)*

CRIPPA, M. M.D. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
a Patterns of gene activity during early development. *Xenopus laevis (Anura)*

CRISTEA, Miss M. M.D. — Cat. de Biol., Inst. Medico-Farmaceutic, Str. Pasteur 6, CLUJ, Rumania
a Influence d'alcool ethylique sur le développement du foie embryonnaire (histochimie et biochimie). *Mus rattus (Rodentia)*

CROISILLE, Y. Dr. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France •
a Developmental, kinetic and immunological studies of enzymes (lactic dehydrogenases, hypoxanthine dehydrogenase, esterases) in different tissues. *Gallus gallus (Aves)*
b Immunohistological studies of the first appearance of organ-specific proteins during kidney differentiation. *Gallus gallus (Aves)*

CROIZAT, B. Dr.3e cycle — Centre de Recherches sur la Nutrit. du C.N.R.S., 9 rue Emile, 92 BELLEVUE, France

CROWELL, P. S. Ph.D., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind. 47401, U.S.A. •

CRUZ, A. R. M.D., Ph.D. — Dept. de Morfol. Hum. Func. e Aplic., Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, RIBEIRÃO PRÊTO, S.P., Brazil
a Histochemistry of developing neurons. *(Vertebrata)* (in collaboration with R. AZOUBEL)
b Allometric growth of some organs. *Rattus rattus (Rodentia)*
c Nuclear size classes in nerve cells. *Mus musculus (Rodentia)*
d Allometric growth of thyroidectomized animals. *Rattus rattus (Rodentia)* (in collaboration with S. IUCIF)
e Allometric growth of the eye in hemispherectomized animals. *Rattus rattus (Rodentia)* (in collaboration with R. AZOUBEL and S. IUCIF)
f Effect of hemispherectomy on the thyroid gland. *Rattus rattus (Rodentia)* (in collaboration with R. AZOUBEL and S. IUCIF)

CRUZ (DE LOSADA), Mrs. M. V. de la M.D. — Dept. de Embriol., Inst. Nac. de Cardiol., Av. Cuauhtemoc nr. 300, MÉXICO 7, D.F., México

CSABA, G. M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary
a Experimental and physiological embryology; teratogenesis. *Rattus rattus (Rodentia)*
b Developmental genetics. *Rattus rattus (Rodentia)*
c The molecular biology of the mast cell formation. *Rattus rattus (Rodentia)*

CSILLIK, B. M.D., Prof. — Dept. of Anat., Univ. Med. School, Kossuth Lajos sug. -út 40, SZEGED, Hungary
a Developmental histochemistry of the archicerebellar cortex. *Mus rattus (Rodentia)* (in collaboration with P. KÁSA)
b Developmental histochemistry and electron miscroscopy of the vegetative ground plexus. *Mus rattus (Rodentia)* (in collaboration with Miss E. KNYIHÁR)
c Development of the adrenergic inhibitory terminals in autonomic ganglia: fluorescence microscopy and electron microscopy. *Mus rattus (Rodentia)* (in collaboration with G. KÁLMÁN and Miss E. KNYIHÁR)

CUCCI, C. E. M.D. — Pediat. Cardiac Service, Lenox Hill Hosp., 100 E. 77th St., NEW YORK, N.Y. 10021, U.S.A.

CUMINGE, Miss D. Lic.ès Sci. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94 NOGENT-sur-MARNE, France
a Etude au microscope electronique des associations de cellules cancéreuses et d'organes embryonnaires. *Gallus gallus (Aves)*

CUOMO, Miss M. Dr. — Ist. di Biol. Gen., Fac. di Med., Univ. di Roma, Policlinico Umberto I, 00100 ROMA, Italy

CURTIS, A. S. G. Ph.D., Prof. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a Structure and physical chemistry of embryonic cell surfaces. *(Vertebrata)*
b Segregation mechanisms in reaggregates of embryonic cells. *(Vertebrata)*
c Differentiation of cells in culture. *(Vertebrata)*

CURY, G. Agr.Phil., Lic.ès Sci. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France

CUSIMANO (CAROLLO), Mrs. T. D.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a The causal development of the mouth. *Discoglossus pictus (Anura)*
b Action of nucleosides and nucleotides on embryonic development. *(Ascidiae)*

CZAPLICKI, J. M.D. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
a The influence of embryonal thymus extracts on the tolerance of transplanted tissues, especially neoplasmic tumours. *(Rodentia)*

CZAPSKA (DZIEKANOWSKA), Mrs. D. Ph.D. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
a Karyology of congenital malformations. *Homo sapiens (Primates)*

CZIHAK, G. Dr.phil. — Arbeitsgr. Biochem. Embryol., Max-Planck-Inst. f. Zellbiol., Abt. Bauer, Melanchthonstr. 36, D 7400 TÜBINGEN, W.Germany
a Molecular biology of early development. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*
b Cleavage pattern. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*
c Regulation of mitosis. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*

CZOŁOWSKA, Miss R. K. Dr. — Dept. of Zool., Univ. of Warsaw, Krakowskie Przedmiéscie 26/28, WARSZAWA 64, Poland
a Cytological and experimental studies on the origin of germinal cytoplasm. *Xenopus laevis, Rana temporaria (Anura)*
b Cytological studies of the effects of ultraviolet irradiation on the germinal cytoplasm. *Xenopus laevis (Anura)*

DABAGIAN (ERAMICHEVA), Mrs. N. V. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

DADONE, L. A. — Cat. „B" de Embriol., Biol. e Histol., Fac. de Cienc. Med., Univ. Nac. de La Plata, 60 y 120, LA PLATA, Argentina

DADOUNE, J. P. Dr.en Méd. — Lab. d'Histol.-Embryol. B, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France
a Analysis of histogenesis in the cerebellum (use of antimitotics, ultrastructural study). *Mus rattus (Rodentia)*
b Autoradiographic study of the Leydig cell in biopsies. *Homo sapiens (Primates)*

DAEMEN, F. J. M. Ph.D. — Dept. of Biochem., Univ. of Nijmegen, Kapittelweg 40, NIJMEGEN, Netherlands
a Development of the rhodopsin cycle; rhodopsin, electroretinogram and morphology from birth till maturity. *Canis domesticus (Carnivora)* (in collaboration with S. L. BONTING)
b Na-K-activated ATPase activity in developing retina of normal animals and of animals with hereditary retinitis pigmentosa. *Rattus norvegicus (Rodentia)* (in collaboration with S. L. BONTING)

DAGLIESH, G. — Dept. of Biol. and Morphol. Sci., Univ. of Calgary, CALGARY 44, Alta., Canada
a Studies of the blastocyst. *Mus musculus (Rodentia)*
DAHL, E. Prof. — Zootom. Dept., Zool. Inst., Univ. of Lund, Helgonavägen 3, S-223 62 LUND, Sweden
DAIKOKU, S. M.D., Ph.D., Prof. — Dept. of Anat., School of Med., Tokushima Univ., Kuramoto-cho 3, TOKUSHIMA, Japan
a Experimental embryology of the endocrine organs. *Rattus rattus (Rodentia)*
b Embryology of the motor and sensory nerve terminals. *Homo sapiens (Primates)*
DAILLIE, J. Dr.ès Sci. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Physiologie de la glande sérigène. *Bombyx mori (Lepidoptera)*
DALCQ, A. M. M.D., Prof. — U.R.E.D., Univ. libre de Bruxelles, 97 rue aux Laines, BRUXELLES, Belgium •
DALLMAN, P. R. M.D. — Dept. of Pediat., Univ. of California, San Francisco Med. Center, SAN FRANCISCO, Calif. 94122, U.S.A.
a Heme proteins
b Embryonic nutrition (biochemistry)
DALTON, H. C. Ph.D., Prof. — Dept. of Biol., Coll. of Sci., Pennsylvania State Univ., 208 Life Sciences I, UNIVERSITY PARK, Pa. 16802, U.S.A.
a Gene control of chromatophore development. *Ambystoma mexicanum (Urodela)*
D'AMELIO, V. Ph.D., Prof. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy •
a Formation and structure of hemoglobin. *Gallus* spec. *(Aves)*
b Antigenic differentiation of red blood cell membrane. *Gallus* spec. *(Aves)*
DAMERON, Miss F. Dr.ès Sci. — Inst. d'Embryol. Expér. du Coll. de France et du C.N.R.S., 11 Place M. Berthelot, 75 PARIS Ve, France
a Morphogenèse du poumon: 1. déterminisme de l'apparition des ébauches (dissociation et réassociation, culture suivie de greffe). 2. moment d'apparition des structures spécifiques des cellules de l'épithélium (ultrastructure). 3. influence de mésenchymes hétérologues sur l'ultrastructure de l'épithélium. *Gallus gallus (Aves)* (en collaboration avec Mrs. L. MARIN (LEWIN))
DAN, Mrs. J. C. Ph.D. — Embryol. Sect., Dept. of Biol., Fac. of Sci., Ochanomizu Univ., Otsuka-machi, Bunkyo-ku, TOKYO, Japan •
DAN, K. Ph.D., Prof. — Tokyo Metropolitan Univ., 1-1 chome, Yakumo-machi, Meguro-ku, TOKYO, Japan •
a Study on the cleavage furrow inducing capacity of the subcortical cytoplasm. *Triturus* spec. *(Urodela)*
b Rhythm of SH fluctuation in the absence of cleavage. *(Echinoidea)*
c Observation on the spawning habit since 1937. *Comanthus japonica (Crinoidea)*
d Suppression of one cleavage cycle and precocious formation of micromeres and the SH cycle. *(Echinoidea)*
D'ANCONA (LUNETTA), Mrs. G. Ph.D. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
DANEHOLT, B. Med.kand. — Dept. of Histol., Karolinska Inst., S-104 01 STOCKHOLM 60, Sweden
a Puff RNA metabolism in polytene chromosomes. *Chironomus tentans (Diptera)*
DANIEL, J. C., Jr. Ph.D., Prof. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER. Colo. 80302, U.S.A.
DANIELI, G. A. Dr.biol.sci. — Ist. di Biol. Anim., Fac. di Sci., Via Loredan 10, 35100 PADOVA, Italy
a Differentiation of salivary glands during larval development. *Drosophila hydei (Diptera)*
DANKMEIJER, J. Med.Dr., Prof. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg 62, LEIDEN, Netherlands •
D'ANNA, T. Dr.nat.sci. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a Enzyme activity in embryonic development. *(Ascidiae)*
b Investigations on the respiratory metabolism during embryonic development. *(Ascidiae)*
DANNEEL, R. Dr., Prof. — Zool. Inst. der Univ., Poppelsdorfer Schloss, 53 BONN, W.Germany
(no embryological work in progress)
DARDA, S. H. Dr.rer.nat. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W. Germany
a Autoradiographic investigations on protein synthesis and changes in cell volume in the regenerating limb. *Triturus vulgaris (Urodela)*
b Protein metabolism in the epidermal apical cap. *Triturus vulgaris, T. alpestris (Urodela)*
D'ASARO, C. N. Ph.D. — Dept. of Biol. and Marine Sci., Univ. of West Florida, PENSACOLA, Fla. 32504, U.S.A.

a Developmental morphology of tropical and subtropical marine forms (embryogenesis and organogenesis through metamorphosis). *Bursa caelata, Distorsio clathrata, Batillaria minima, Bittium varium (Gastropoda), Chione cancellata, Codakia orbicularis, Atrina rigida (Lamellibranchiata), Clypeaster rosaceus (Echinoidea)*

DASGUPTA, B. Ph.D., Prof. — Dept. of Zool., Darjeeling Government Coll., North Bengal Univ., P.O. DARJEELING, W.Bengal, India

a Reproduction and development. *Raycila rayi, Hepatocystis* spec. *(Haemosporidia, Sporozoa)*

DAUGERAS, Miss N. — Lab. d'Anat. Comp., Fac. des Sci. d'Orsay, Univ. de Paris, Bâtiment 441, 91-ORSAY, France

a Etude expérimentale de l'apparition du glycogène hépatique chez l'embryon. *Gallus domesticus (Aves)*

DAUWALDER (RICHARDS), Mrs. M. Ph.D. — Cell Research Inst., B.L. 220, The Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.

a The development of tissues during embryogenesis with special reference to the differentiation of the Golgi apparatus and its activity in the secretion of specialized cell walls (electron microscopy, radioautography and EM enzyme cytochemistry). *Zea mays (Gramineae)*

b Cell wall formation during mitosis. *Zea mays (Gramineae)*

c Cleavage with emphasis on RNA metabolism and nucleolar changes. *Helix aspersa (Pulmonata, Gastropoda)*

d The differentiation of the Golgi apparatus during differentiation of specialized cell types. *Helix aspersa (Pulmonata, Gastropoda)*

DAVENPORT, R. Ph.D. — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A.

a Electrophoretic and immunophoretic analysis of basic proteins during early embryonic development. *Strongylocentrotus purpuratus, Lytechinus variegatus (Echinoidea), Ciona intestinalis, Ascidia nigra (Tunicata)*

DAVID (BÖGLI), Mrs. D. Lic.ès Sci. — Lab. de Biol. Anim., 1 Av. Vercingétorix, 63 CLERMONT FERRAND, France

a Organogenèse de l'estomac embryonnaire. *Oryctolagus cuniculus (Lagomorpha)*

DAVID, G. Dr.en Méd., Prof. — Lab. d'Histol.-Embryol. A, Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

a Facteurs Rhesus. *Homo sapiens (Primates)*

b Incompatibilités foeto-maternelles. *Oryctolagus cuniculus (Lagomorpha), Rattus* spec. *(Rodentia)*

DAVID, G. B. Ph.D. — Dept. of Biophys., Manhattanville Inst., Columbia Univ., 632 W. 125th St., NEW YORK, N.Y. 10027, U.S.A.

DAVIDOVA, S. I. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Effect of gonadotropins and changes in the germinal vesicle and in the oocyte cytoplasm during maturation. *(Acipenseridae, Chondrostei; Amphibia)* (in collaboration with Mrs. T. A. DETTLAFF)

DAVIDSON, E. H. Ph.D. — Rockefeller Univ., 66th St. and York Ave., NEW YORK, N.Y. 10021, U.S.A.

a Study of gene activity in oogenesis, the species and function of nucleic acids produced in lampbrush stage oocytes. *Xenopus laevis (Anura)* (in collaboration with Mrs. B. R. HOUGH-RAYMOND)

b Study of the molecular basis of cytoplasmic prelocalization. *Ilyanassa obsoleta (Gastropoda)* (in collaboration with Mrs. B. R. HOUGH-RAYMOND)

DAVIES, D. V. D.Sc., Prof. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E.1, England

a Development of joints. *(Mammalia)*

b Placentation. *(Vertebrata)*

DAVIS, Ch. C. Ph.D., Prof. — Dept. of Biol., Mem. Univ. of Newfoundland, ST. JOHN'S, Newfoundland, Canada

DAVIS, G. R. F. Ph.D. — Research Station, Research Branch, Canada Agriculture, Univ. Campus, SASKATOON, Sask., Canada

a The quantitative and qualitative requirements of immature stages for amino acids and the intermediary metabolism of these amino acids. *Oryzaephilus surinamensis (Silvanidae, Coleoptera), Melanoplus sanguinipes (Acrididae, Orthoptera), Ctenicera destrucor (Elateridae, Coleoptera)*

b The effects of anti-metabolites on development and morphology. *Oryzaephilus surinamensis (Silvanidae, Coleoptera), Melanoplus sanguinipes (Acrididae, Orthoptera), Ctenicera destructor (Elateridae, Coleoptera)*

DAVIS, L. V. Ph.D. — Dept. of Zool., Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.

DAWES, C. M. B.Sc. — Dept. of Physiol. and Biochem., Univ. of Reading, READING, Berks., England

a Study of the methods by which the developing embryo is able to control the acid-base status of its blood under normal and experimental conditions. *Gallus domesticus (Aves)*

DAWID, I. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A. •

a Deoxyribonucleic acid synthesis during early development. *Rana pipiens, Xenopus laevis (Anura)* (in collaboration with R. F. SWANSON)

DBALÝ, J. MUDr. — Anat. Inst. Univ. Bern, Bühlstr. 26, 3012 BERN, Switzerland

a Development of coronary arteries under normal and experimental conditions. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

b Heart morphometry. *Gallus domesticus (Aves) Rattus norvegicus (Rodentia)*

DEAN, D. Ph.D., Prof. — Ira C. Darling Center for Research, (Marine Lab.), Univ. of Maine, WALPOLE, Me. 04573, U.S.A.

a Anterior regeneration. *Polydora ligni, Streblospio benedicti, Pygospio elegans (Sedentaria, Polychaeta)*

b Reproductive biology. *Polydora ligni (Sedentaria, Polychaeta)*

DEARDEN, M. B.Sc. — Didsbury Coll. of Educ., Wilmslow Rd., MANCHESTER 20, England

DE BAVAY, J. M. F. X. B.Sc. — Dept. of Zool., Fac. of Sci., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia

a Normal embryology. *Kyarranus sphagnicolus (Leptodactylidae, Anura)*

DE BEER, Sir G. R. Prof. — La Colline, 1880 BEX, Switzerland •

DE BOOM, H. P. A. Prof. — Dept. of Anat., Fac. of Vet. Sci., Univ. of Pretoria, P.O. ONDERSTEPOORT, South Africa

DECK, J. D. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Virginia, CHARLOTTESVILLE, Va. 22901, U.S.A.

a Cytological changes in regenerating epithelium. *Mus musculus (Rodentia)*

b Cytological changes in muscle after injury. *Diemictylus viridescens (Urodela)*

c Origin and development of cell surface coats. *Perophora viridis (Tunicata)*

DECKER, J. D. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Missouri, COLUMBIA, Mo. 65201, U.S.A.

a Development of the otocysts and their influence on the ontogeny of behavior. *Gallus domesticus (Aves)*

b Pre- and postnatal behavior (a film of the behavior during development within the marsupium). *Didelphis virginiana (Marsupialia)*

DECROLY (BRIERS), Mrs. M. D.Sci.Chim. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium

a Métabolism des acides nucléiques au cours du développement embryonnaire. *Xenopus laevis (Anura)*

b Etude des ribosomes au cours du développement. *Xenopus laevis (Anura)*

c Mesure de la capacité template des acides ribonucléiques au cours du développement embryonnaire, dans un système hétérologue et un système homologue. *Xenopus laevis (Anura)*

DE FABRO, Miss S. P. M.D., Prof. — Inst. de Biol. Celular, Univ. Nac. de Córdoba, Casilla Postal 362, CÓRDOBA, Argentina

DE FEO, V. J. Ph.D., Prof. — Dept. of Anat., Univ. of Hawaii, 1951 East-West Rd., HONOLULU, Hawaii 96822, U.S.A.

a Blastocyst-endometrial relationship. *(Rodentia)*

b Decidualization. *(Rodentia)*

De FOSSARD, R. A. Ph.D. — Dept. of Bot., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia

a Physiology of flower initiation; development of bioassay for floral initiating substances based on in vitro culture of defoliated stem tips; histo- and cytochemical study of vegetative and reproductive apices. *Chenopodium rubrum (Chenopodiaceae)*

DEGENHARDT, K.-H. Dr.med., Prof. — Inst. für Humangenetik und vergl. Erbpathol. der Univ., Paul-Ehrlich St. 41, 6 FRANKFURT/Main, W. Germany

a Influence of antimetabolites (5-fluoro-2-deoxycytidine) on pattern formation in early primordia of different inbred strains. *Mus musculus, Mesocricetus auratus (Rodentia)*

b Influence of X-irradiation (dosages: 130 r, 65 r, 30 r, 15 r, 7 r) on pattern formation in early primordia of embryonic development. *Mus musculus, Mesocricetus auratus (Rodentia)*

c Influences of chemical agents on blastogenesis. *(Mammalia)*

DEGLI ESPOSTI, Miss A. M. Dr. — Ist. di Anat. Comp., Via Belmeloro 8, BOLOGNA (103), Italy

DeHAAN, R. L. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
— Dept of Biol., Johns Hopkins Univ., Charles & 34th Sts., BALTIMORE, Md. 21218, U.S.A. •

a Morphogenetic movements and cell migration associated with embryonic heart formation, studied with microsurgical, cinematographic and autoradiographic techniques. *Gallus gallus (Aves)*

b Pacemaker formation and the initiation of the heartbeat; regulation of spontaneous activity of embryonic heart cells in tissue culture. *Gallus gallus (Aves)*

c Spatial organization and supracellular patterns in embryonic tissues. *Gallus gallus (Aves)*

DE HOYOS, E. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

a Electron microscopy of developing islets of Langerhans. *Mus musculus (Rodentia)*

DELEANU, M. Dr.med. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania

a Experimental syndactylism. *Gallus domesticus (Aves)*

b Embryonic heterografts. *Gallus domesticus (Aves)*

DELLA CROCE, N. Dr.Nat.Sci., Prof. — Ist. di Zool., Univ. di Genova, Via Balbi 5, GENOVA, Italy

a Embryo development of a parthenogenetic marine form. *Penilia avirostris (Cladocera, Crustacea)* (in collaboration with Mrs. S. BETTANIN-BELGRANO)

b Growth of the embryo. *Penilia avirostris (Cladocera, Crustacea)* (in collaboration with Mrs. S. BETTANIN-BELGRANO)

c Formation of resting eggs. *Penilia avirostris (Cladocera, Crustacea)* (in collaboration with Mrs. S. BETTANIN-BELGRANO)

DELMAS, A. Prof. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

DeLONG, G. R. M.D. — Dept. of Neurol., Massachusetts Gen. Hosp., BOSTON, Mass. 20015, U.S.A.

DEL RÍO, A. G. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina

a Intermediate metabolism during early development; glycolysis. *Bufo arenarum (Anura)*

DE LUCA, V. M.D., Prof. — Ist. di Zool., Univ. di Catania, Via Androne 81, 95124 CATANIA, Italy

a Physiological and experimental embryology of the earliest developmental stages. *Porcellio laevis (Isopoda), Eyprepocnemis plorans (Orthoptera)*

DELYE (ROLLIN), Mrs. P. M. Lic.ès Sci. — Lab. de Morphogénét. Anim., Fac. des Sci., Place Victor Hugo, 13 MARSEILLE 3, France

DeMAGGIO, A. E. Ph.D. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H. 03755, U.S.A.

a Experimental developmental morphology. *(Plantae)*

DENIS, H. A. Dr.ès Sci. — Lab. de Biochim., Univ. de Liège, 17 Place Delcour, LIÈGE, Belgium

a Etude du rôle des acides nucléiques dans la différenciation embryonnaire. *Xenopus laevis (Anura)*

b Interactions nucléo-cytoplasmiques durant le développement de l'oeuf. *Arbacia lixula, Paracentrotus lividus (Echinoidea)*

DENIS, Miss S. Lic.Sci.Zool. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium

a Studies on the metamobism of lethal hybrids. *(Echinoidea; Amphibia)*

DENKER, H.-W. — Arbeitsgr. Prof. G. H. M. Gottschewski am Max-Planck-Inst. für Immunbiol., Stefan-Meier-Str. 8, 78 FREIBURG, W.Germany

a Histochemistry of acid muco substances and enzymes in early stages (fertilization through implantation). *Mus musculus, Rattus norvegicus, Mesocricetus auratus, Cavia cobaya (Rodentia)*

DENNE, M. P. Ph.D. — Plant Physiol. Div., Dept. of Scient. and Industrial Research, PALMERSTON NORTH, New Zealand

DENT, J. N. Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall. CHARLOTTESVILLE, Va. 22903, U.S.A.

a Metamorphic patterns. Various species *(Amphibia)*

DEOL, M. S. Ph.D. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C. 1, England

DEPARIS, P. Dr.Biol. — Lab. de Biol. Génér., Fac. des Sci., 118 Route de Narbonne, 31 TOULOUSE (04), France

a Hématopoièse. *(Urodela)*

DÉPÊCHE, J. — Lab. d'Evolution des Etres Organisés, Fac. des Sci., 105 Bd. Raspail, PARIS VIe, France

a Physiological investigations on embryos of viviparous fishes developing in vitro. *Poecilia reticulata (= Lebistes reticulatus), Xiphophorus helleri, Gambusia affinis, Heterandria formosa (Poeciliidae, Teleostei)*

DE REGGI, L. M. Dr.Spec. — Sect. de Biol. Gén. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Variations morphologiques et physiologiques dans le développement, sous l'action de divers facteurs. *(Phytophthires, Rhynchota)*

DEROM, R. M. J. M.D., Ph.D. — Dept. of Obstet. and Gynecol., Fac. of Med., Univ. of Ghent, Aan de Bocht 6, GHENT, Belgium

a Anaerobic metabolism in the fetus (determination of blood lactate and pyruvate; calculation of "excess lactate"). *Homo sapiens (Primates)*

b Longitudinal study of uniovular twins (determination of genotype based on structure of placental membranes and of differences in blood groups; followup on a long term basis). *Homo sapiens (Primates)*

DESALU, A. B. O. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria

DE SILVA, S. E. N. B.Sc. — Dept. of Biol. Sci., Fac. of Sci., Vidyodaya Univ., Gangodawila, NUGEGODA, Ceylon

a Morphological changes in the tail during metamorphosis. *Bufo melanostictus (Anura)*

DESSOUKY, D. A. M.D., Ph.D. — Dept. of Anat., School of Med., Georgetown Univ., 3900 Reservoir Rd., N.W., WASHINGTON, D.C. 20007, U.S.A.

DESVEAUX (CHABROL), Mrs. J. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France

a Radioactive precursors incorporation in some embryonic tissues. *Gallus domesticus (Aves)*

DE TERRA (WHITTAKER), Mrs. N. Ph.D. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A.

a Morphogenesis and nucleo-cytoplasmic interactions studied by microsurgery, histochemistry and autoradiography. *Stentor coeruleus (Ciliata)*

DETTLAFF, Mrs. T. A. Dr.biol.sci., Prof. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R. •

a The nature of the specificity of oocyte nuclei in the process of oocyte maturation. *(Amphibia)*

b Effect of gonadotropins and changes in the germinal vesicle and in the oocyte cytoplasm during maturation. *(Acipenseridae, Chondrostei; Amphibia)* (in collaboration with S. I. DAVIDOVA, J. G. SCHMERLING, M. N. SKOBLINA, T. B. AISENSTADT)

c Time regularities of the maturation process; temperature effect upon maturation processes in vivo and in vitro. *(Amphibia)* (in collaboration with T. RUDNEVA)

d Cell division: duration, mechanism, relation to the process of differentiation. *Acipenseridae, Chondrostei; Amphibia)*

DE TURENNE, Miss M. Dr.Spec. — Sect. de Biol. Génér. et Appl., Fac. des Sci. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Control of DNA synthesis in the silk gland during the fifth larval instar. *Bombyx mori (Lepidoptera)*

DEUCHAR, Miss E. M. Ph.D. — Anat. Dept., The Med. School, University Walk, BRISTOL BS8 1TD, England

a Changes in individual cells during processes of neural induction and early differentiation studied by tissue culture and biochemical methods. *Xenopus laevis (Anura)*

b Morphogenetic movements and tissue differentiation in primitive streak to somite stages studied by cinematography and operations in embryo culture. *Rattus norvegicus (Rodentia)*

DEUTSCH, G. Dr.med. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M. Viteazul 24, TIMIŞOARA, Rumania

a Embryonic and adult kidney metabolism. *(Mammalia)*

b Autoradiography in embryonic tissues. *Gallus domesticus (Aves)*

DEVILLERS, Ch. Dr.ès Sci., Prof. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France

a Studies on respiration during early stages of egg development. *Salmo irideus S. fario (Teleostei)* (in collaboration with Mrs. M. CHANCONIE-MAURY)

b Relationships between respiration and oxidative phosphorylations as shown by the action of 2-4 dinitrophenol and some inhibitors of respiration in early stages of egg development. *Salmo irideus, S. fario (Teleostei)* (in collaboration with Mrs. M. CHANCONIE-MAURY)

DE VINCENTIIS, M. Prof. — Cat. di Istol. ed Embriol., Univ. di Camerino, CAMERINO, Italy •

DHAINAUT, A. — Lab. de Zool., Fac. des Sci., B.P. 36, 59 LILLE-Distribution, France

a Ovogenèse; utltrastructure et autoradiographie à haute résolution. *Nereis diversicolor, N. pelagica (Polychaeta)*

DHOUAILLY, Miss D. Dr. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

a Experimental analysis of the specific differentiation of the neoptile and teleoptile plumage in chimaeric combinations between two species. *Gallus domesticus, Anas boschas (Aves)*

b Analysis of the differentiation of supernumerary limb; study of the plumage that develops thereon. *Gallus domesticus, Anas boschas (Aves)*

DIAMOND, M. Ph.D., Prof. — Dept. of Anat., Univ. of Hawaii, 1951 East-West Rd., HONOLULU, Hawaii 96822, U.S.A.

a Sexual differentiation and masculinization. *(Mammalia)*

b Pseudopregnancy. *(Mammalia)*

DiBERARDINO, Miss M. A. Ph.D., Prof. — Dept. of Anat., Woman's Med. Coll. of Pennsylvania, 3300 Henry Ave., PHILADELPHIA, Pa. 19129, U.S.A. •

a Nuclear, chromosomal and cytoplasmic changes during development. *Rana pipiens (Anura)*

DICK, D. A. T. D.Phil. — Dept. of Anat., Univ. of Dundee, DUNDEE DD1 4HN, Scotland, U.K.

a Study of water and ion fluxes in oocytes. *Bufo bufo (Anura)*

DICKSON, A. D. M.D. — Div. of Morphol. Sci., Fac. of Med., Univ. of Calgary, CALGARY 44, Alta., Canada

a Control and significance of trophoblastic giant cell transformation of the blastocyst. *Mus musculus (Rodentia)*

b Hormonal secretion by unimplanted blastocysts. *Mus musculus (Rodentia)*

DICKSON, D. H. M.Sc. — Dept. of Anat., Univ. of Western Ontario, LONDON, Ont., Canada

a Electron microscopy of the developing eye. *(Urodela)*

DIDIER (MARTIN), Mrs. E. Lic.ès Sci. — Lab. de Biol. Anim., 1 Av. Vercingétorix, 63 CLERMONT-FERRAND, France

DIEHL, F. A. Ph.D. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va. 22903, U.S.A.

a Problems of development: cell and tissue migrations; the roles of individual cell types during morphogenesis; the synthesis of extracellular mesoglea and perisarc and their role in development. *Cordylophora caspia (Hydroidea)*

DIETERLEN (LIÈVRE), Mrs. F. Dr.ès Sci. — Inst. d'Embryol. expér. du Coll. de France et du C.N.R.S., 11 Place M. Berthelot, PARIS Ve, France

a Endoderm-mesenchyme interactions in the development of the pancreas: reassociation with heterologous mesenchymes (lung, gizzard or somatopleura) (organotypical cultures followed by coelomic grafts). *Gallus gallus (Aves)*

b Inductive interactions in the early development of the spleen. *Gallus gallus (Aves)*

c Enzyme development in heterologous reassociations (pancreatic epithelium + lung mesenchyme). *Gallus gallus (Aves)*

DI GRANDE, Miss F. Dr. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy

a X-ray destruction of germ cells, sterile gonad development and sex differentiation. *Bufo bufo, Rana dalmatina (Anura)*

DILLARD, W. Ph.D. — Max-Planck-Inst. für Zellbiol., Anton-Dohrn-Weg, Postfach 1009, D 294 WILHELMSHAVEN, W.Germany

a RNA-synthesis. *Acetabularia* spp. *(Algae)*

DI MARCOTULLIO, A. D.Sc. — Ist. di Zool. e Anat. Comp., Univ. di Trieste, Via Alfonso Valerio, 32 TRIESTE, Italy

a Regeneration and germ cell differentiation. *(Planariidae, Turbellaria)*

DIMOND, Sister M. T. Ph.D., Prof. — Dept. of Biol., Trinity Coll., WASHINGTON, D.C. 20017, U.S.A.

a Histogenesis and interrelations of endocrines: the hypophysis under normal conditions and after treatment with goitrogens; the developmental sequence of organic iodine compounds in the thyroid; ultimo-branchial body and calcitonin in bone development. *Chelydra serpentina serp.* and other spp. *(Chelonia)*

DI STEFANO, L. Dr. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy

DOANE, Mrs. W. W. Ph.D. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a Developmental and physiological genetics of isoamylases: analysis of genetic regulatory mechanisms in cellular differentiation as revealed through the combined techniques of biochemistry, genetics and cytogenetics. *Drosophila melanogaster, D. hydei* and other spp. *(Diptera)*

b Developmental and experimental analysis of mutants characterized by abnormalities in lipid and carbohydrate metabolism, as well as in endocrine and reproductive physiology. *Drosophila melanogaster (Diptera)*

DOBKIN, Sh. Ph.D. — Dept. of Biol. Sci., Florida Atlantic Univ., BOCA RATON, Fla., U.S.A.

DOBROWOLSKI, J. M.Sc. — Dept. of Zool., Wyzsza Szkoła Pedagogiczna, ul. Podbrzezie 3, KRAKÓW, Poland

a Critical periods for simultaneous action of weightlessness and ionizing radiation on development. *Cricetus auratus (Rodentia)*

b Influence of salinity, X-rays and temperature on larval development and assessment of critical periods. *Salamandra salamandra (Urodela)*

c Embryo culture. *Salamandra salamandra (Urodela)*

d Influence of temperature on sex ratio. *Salamandra salamandra (Urodela)*

e Influence of salinity, temperature and combined action of weightlessness and X-rays on embryonic and larval development; morphogenetic effect, lethality and mechanisms of action. *Xenopus laevis (Anura)*

DODSON, J. W. Ph.D. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England

a Secretory activity of larval epidermis. *Ambystoma* spec. *(Urodela)*

DOERR (SCHOTT), Mrs. J. Dr.ès Sci. — Lab. de Zool. et d'Embryol. Exper., Fac. des Sci., Univ. de Strasbourg, 12 rue de l'Université, STRASBOURG, France

DOHERTY, R. A. M.D. — Dept. of Pediat., School of Med., Stanford Univ., 300 Pasteur Drive, PALO ALTO, Calif. 94304, U.S.A.
a Temporal aspects of transcription in early embryos. *Mus musculus (Rodentia)*
b Chromosomal mapping of transcription events during development. *Mus musculus (Rodentia), Homo sapiens (Primates)*

DOHLE, W. Dr.rer.nat. — I. Zool. Inst. der Freien Univ., Kön.-Luise-Str. 1-3, 1 BERLIN 33, W.Germany
a Embryology. *(Diplopoda)*
b Embryology. *Scutigera coleoptrata (Notostigmophora, Chilopoda)*
c Formation of anlagen by derivatives of teloblasts. *Diastylis rathkei (Cumacea, Crustacea)*

DOLFINI, Miss S. D.Sc. — Ist. di Genet., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy
a Development and cytology of cultured cells. *Drosophila melanogaster (Diptera)*

DOLLANDER, A. Dr.en Méd., Prof. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France •

DOMAC (TEŠAR), Mrs. B. M.D., Sc.M.D. — Inst. of Histol. and Embryol., Fac. of Med., ZAGREB, Šalata, Yugoslavia
a Selective inhibitory effects of the hypophysis upon growth and differentiation of the adrenal glands in the fetus. *Rattus norvegicus (Rodentia)*

DOMURAT, J. D.Sc. — Dept. of Ichthyol., Agric. Coll., OLSZTYN 5, Poland
a Development of eggs in waterfree medium (paraffin oil). *Salmo trutta, S. gairdneri (Teleostei)*
b The properties of perivitelline fluid of eggs developing in waterfree medium. *Salmo trutta, S. gairdneri (Teleostei)*
c Changes in structure of embryos developing in waterfree medium. *Salmo trutta, S. gairdneri (Teleostei)*

DONALDSON, W. E. Ph.D., Prof. — Poultry Sci. Dept., School of Agric. and Life Scis., North Carolina State Univ., Box 5307, RALEIGH, N.C. 27607, U.S.A.
a The effects of maternal diet on embryonic fat metabolism (fatty acid biosynthesis, oxidation, and interconversion). *Gallus domesticus, Coturnix coturnix japonica (Aves)*

DONATO (CELI), Mrs. A. — Ist. di Zool. e di Anat. Comp., Fac. di Sci., Univ. di Messina, Via dei Verdi 75, 98100 MESSINA, Italy
a Vitellogenesis. *Chromis chromis, Boops boops (Teleostei)*
b Cytochemistry of yolk globules in oocytes. *Chromis chromis, Boops boops (Teleostei)*

DONGEN, C. A. M. van M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
a Protein differentiation during development studied by means of disc electrophoresis; descriptive and experimental. *Limnaea stagnalis (Gastropoda)*

DONNELLY, Miss G. — Depts. of Microbiol. and Biochem., Med. Center, Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.
a Analysis of the physico-chemical properties of DNA in differentiating cells. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus musculus, Rattus rattus (Rodentia), Homo sapiens (Primates)* (in collaboration with S. P. MODAK)

DONNER, M. W. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Anatomical and radiological studies of circulation in the maternal placenta. *Macaca mulatta, Homo sapiens (Primates)* (in collaboration with H. R. MISENHEIMER and Miss E. M. RAMSEY)

DOORENMAALEN, W. J. van M.D., Prof. — Dept. of Med. Anat. and Embryol., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands •
a Immunological and immunochemical investigations on lens proteins in induction and differentiation. *(Aves), Homo sapiens (Primates)*

DORFMAN, A. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Biochemistry of connective tissues.

DORGAN, W. J. Ph.D. — Dept. of Zool.-Entomol., Montana State Univ., BOZEMAN, Mont. 59715, U.S.A.
a Age-related changes in rat placental giant cells in tissue culture. *Rattus norvegicus (Rodentia)*

DORLE, A. K. Ph.D. — Post-Graduate Dept. of Zool., Univ. of Nagpur, NAGPUR, India

DOSKOČIL, M. MUDr., D.Sc., Prof. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a Experimental embryology of the hypophysis. *Gallus domesticus (Aves)*

DOSSEL, W. E. Ph.D., Prof. — Electron Microscope Lab., Dept. of Anat., School of Med., Creighton Univ., 657 North 27th St., OMAHA, Nebr. 68131, U.S.A.
a The fine structure of endocrine organs of normal and hypophysectomized embryos. *Gallus domesticus (Aves)*
b The fine structure of embryonic organs (descriptive). *Gallus domesticus (Aves)*

c Studies on development of function and fine structure of mesonephric and metanephric kidneys, liver and pancreas. *Gallus domesticus (Aves)*

DOTSU, Y. Dr.Agric. — Dept. of Aquatic Biol., Fac. of Fish., Nagasaki Univ., Bunkyo-machi 1-14, NAGASAKI, Japan

DOTT, H. M. Ph.D. — A. R. C. Unit of Reprod. Physiol. & Biochem., Univ. of Cambridge, 307 Huntington Rd., CAMBRIDGE, England

a Effect of irradiation of spermatozoa in vitro under various conditions on the development of eggs exposed to them. *Oryctolagus cuniculus (Lagomorpha)*

DOUCET (DE BRUÏNE), Mrs. M. H. M. M.Sc. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a Induction of gastrulation. *Ambystoma mexicanum (Urodela)*

DOUŠOVÁ (ŠVEHLOVÁ), Mrs. M. M.D. — Lab. of Embryophysiol., Inst. of Physiol., Fac. of Gen. Med., Charles University, Albertov 5, PRAGUE 2, Czechoslovakia

a Development of fetal brain tissue in tissue culture. *(Aves; Mammalia)*

b Developmental effects of methionine-sulphoximine and related biochemical compounds upon the fetal brain tissue. *(Aves)*

DOWNIE, J. R. B.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a Cell behaviour, mainly epithelial cells, in the expansion of the blastoderm. *Gallus gallus (Aves)*

DRACHMAN, D. B. M.D., Prof. — Dept. of Neurol., Johns Hopkins Hosp., BALTIMORE, Md. 21205, U.S.A.

a Development of joints and joint malformations. *Gallus domesticus (Aves)*

b Development of motor end plates (neuromuscular junctions). *Gallus domesticus (Aves)*

c Developmental neuropharmacology (transmitter substances). *Gallus domesticus (Aves)*

d Trophic influence of motor neurons in developing muscle. *Gallus domesticus (Aves), (Mammalia)*

DRAGOMIROV, N. I. Dr.biol.sci., Prof. — Inst. of Evol. Morphol. and Ecol. of Anim., Acad. of Sci. of the U.S.S.R., Lenin Ave. 33, MOSCOW-V-71, U.S.S.R.

DREICHLINGER, O. F. Dr.Chem.Sci. — Centrul de Embryol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania

a Normal and pathological respiration in embryonic tissue. *Gallus domesticus (Aves)*

b Autoradiography in embryonic tissues. *Gallus domesticus (Aves)*

DREYER, Miss M. V. M.Sc. — Dept. of Zool., Univ. of the O.F.S., BLOEMFONTEIN, S.Africa

a An histocytological and histocytochemical investigation on the epithelioneural bodies. *Gallus domesticus (Aves)*

b The application of different stains (with differences of het pH) to detect the Nissl bodies in embryonic and adult neurons. *Gallus domesticus (Aves), Lepus cuniculus (Lagomorpha)*

DRUKKER, J. Ph.D. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands

a Descriptive and experimental studies of the developing central nervous system. *Gallus domesticus (Aves)*

b Histochemical characteristics of developing chemoreceptor organs. *Oryctolagus cuniculus (Lagomorpha)*

c Embryology of the endocrine cells of the pancreas. *Gallus domesticus (Aves)*

d Light-microscopical, electron-microscopical, histochemical, physiological and experimental teratogenetic studies of heart development in the embryo. *Gallus domesticus (Aves)* (in collaboration with J. A. LOS, H. M. LAANE and F. J. BIESENBEEK)

DÜBENDORFER, A. dipl.phil.II — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH 8006 ZÜRICH, Switzerland

a Imaginal discs. *Phormia regina (Diptera)*

DUBEY, P. N. M.Sc., Prof. — Dept. of Anat., Med. Coll., NAGPUR-3, M.S., India

a Peripheral nucleus (Hofmann's nucleus major) of the spinal cord. 1. Influence of periphery (limb) on its morphogenesis. 2. Cytoarchitecture. *Gallus domesticus (Aves)*

b Differentiation of unipolar cells of spinal ganglion in tissue culture. *Gallus domesticus (Aves)*

c The influence of the peripheral field on the morphogenesis of the anterior horn cells. *Gallus domesticus (Aves)*

d Polydactyly — an experimental analysis. *Gallus domesticus (Aves)*

e Regulatory process of mesoderm in limb morphogenesis; various presumptive areas at pre-axial and post-axial borders of limb bud/wing bud of stage 19-20 embryos are ablated. *Gallus domesticus (Aves)* (in collaboration with T.L. PATIL)

DUBOIS, R. Dr. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France

a Lignée germinale et morphogenèse sexuelle. *Gallus gallus (Aves)*

DUKE, E. J. Ph.D. — Zool. Dept., Univ. Coll., Stillorgan Road, DUBLIN 4, Ireland

a Genetic and biochemical investigations of abnormal 5-fluorouracil resistance and streptomycin sensitivity in different strains; developmental stage concerned and biochemical mechanisms. *Drosophila melanogaster (Diptera)*

b Studies on the nature of dehydrogenase (mainly lactate and xanthine) regulation and expression at different stages of development. *Salmo salar, S. trutta* and hybrids *(Salmonidae, Teleostei)*

DUKE, K. L. Ph.D., Prof. — Dept. of Anat., Duke Univ. Med. Center, DURHAM, N.C. 27706, U.S.A.

a Comparative histology of the ovary (including developmental stages and history of germ cells). *Cynocephalus volans, C. variegatus (Dermoptera), Tarsius tarsier (Primates)*

DUMONT, J. N. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Cytological studies of the oocytes with special emphasis on early developmental stages and vitellogenesis. *Xenopus laevis (Anura)*

b Electron microscopic studies of nucleolar changes during Wolffian lens regeneration. *(Urodela)*

DUNCAN, D. Ph.D., Prof. (Emer.) — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex. 77550, U.S.A.

a Quantitative studies on the development of myelin in the central nervous system; effects of long tract destruction before myelination. *Rattus norvegicus (Rodentia), Felis domestica (Carnivora)*

b Combined light and electron microscopic study of numbers and sizes of fibers and numbers and fine structure of the glia cells. *Rattus norvegicus (Rodentia), Felis domestica (Carnivora)*

DUNCAN, J. T. Ph.D., Prof. — Dept. of Cell and Molec. Biol., School of Nat. Sci., San Francisco State Coll., SAN FRANCISCO, Calif. 94132, U.S.A.

a Pigment cell migration and differentiation; developmental control of migration and pattern formation; developmental behavior of chromatophores and their immunological interactions in mixed populations of pigment cells from different species or from animals with different pigment pattern genotypes. *Taricha torosa, Ambystoma mexicanum (Urodela)*

b Heart determination and differentiation; temporal and spatial patterns of control of heart development; isolation and characterization of intracellular materials controlling heart development. *Taricha torosa, Ambystoma tigrinum (Urodela)*

DUNN, G. A. B.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a Behaviour and interactions of nerve fibres from spinal ganglia grown in tissue culture. *Gallus gallus (Aves)*

DUPRAT (ESCUDIÉ), Mrs. A.-M. Dr.ès Sci. — Lab. de Biol. Génér., Fac. des Sci., 118 Route de Narbonne, 31 TOULOUSE (04), France

a Etude expérimentale de la différenciation des cellules embryonnaires en culture in vitro. *(Urodela)* (en collaboration avec J. C. BEETSCHEN)

DURAN DE LOPEZ, Mrs. L. M.D. — Cat. de Embriol., Fac. de Med., Univ. de Los Andes, MÉRIDA, Venezuela

DURAND, J. P. — Lab. Souterrain du C.N.R.S., 09 MOULIS (Ariège), France

DURANTE, Miss M. C. D.Sc., Prof. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy

a Cholinesterase, dipeptidase and other enzymes in embryonic development. *(Ascidiae; Pisces)*

b The biochemistry of regeneration. *(Annelida)*

DURCHON, M. Prof. — Lab. de Zool., Fac. des Sci., Univ. de Lille, B.P. 36, 59 LILLE-Distribution, France •

DUSPIVA, F. Dr., Prof. — Zool. Inst. der Univ., Physiol. Lehrstuhl, Berlinerstr. 15, 6900 HEIDELBERG, W. Germany •

a Localization of enzymes within the embryo and in subcellular fractions. *(Insecta; Amphibia)*

b Protein differentiation, ontogeny of enzyme patterns. *(Insecta; Amphibia)*

c Energy metabolism and metabolism of nucleic acids, nucleotides, cofactors during development. *(Teleostei; Amphibia)*

d Cell-physiological mechanisms of malformation in early development. *(Amphibia)*

DUTRIEU, Miss J. Dr.ès Sci. — Lab. de Physiol. Génér., Fac. des Sci. de Bordeaux, Avenue des Facultés, 33 TALENCE, France

a Métabolisme glucidolipidique au cours du développement. *Artemia salina (Anostraca, Crustacea), Calliphora erythrocephala (Diptera), Carausius morosus (Phasmidoptera)*

DUTTON, R. W. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O.Box 109, LA JOLLA, Calif. 92037, U.S.A.

a Development of immune system; in vitro differentiation of immunogenic response

DWORKIN, M. Ph.D., Prof. — Dept. of Microbiol., Med. School, Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

a Developmental biology of fruiting. *Myxococcus xanthus (Myxobacteria)*
   1. Role and nature of a stable m-RNA required for microcyst germination
   2. Regulation of macromolecular synthesis during development
   3. Nature of proteins synthesized during germination
   4. Mechanism of induction of microcyst formation

DWORNIK, J. J. Ph.D. — Dept. of Anat., Univ. of Louisville, 101 West Chestnut St., LOUISVILLE, Ky. 40202, U.S.A.
a Effects of podophyllin and temperature on skeletal development (alizarin technique). *Rattus norvegicus (Rodentia)*
b Effects of colchicine on skeletal development (alizarin technique). *Rattus norvegicus (Rodentia)*
c Effects of hypervitaminosis A on tooth development (histochemical techniques). *Mus musculus (Rodentia)*
d A study on tissues in the torpid mutant to determine if there are any differences between abnormal animals and normal litter mates. *Mus musculus (Rodentia)*

DYLEVSKÝ, I. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a Prenatal development of muscles. *Homo sapiens (Primates)*

DZIUBA, P. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
a Karyology of congenital malformations. *Homo sapiens (Primates)*
b Palmar and plantar dermatoglyphics in congenital malformations and inherited diseases. *Homo sapiens (Primates)*
c The influence of oestrogens on liver regeneration after partial hepatectomy. *(Rodentia)*

EAKIN, R. M. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A. •
a Determination of neural plate, sucker and hypophysis. *Hyla regilla (Anura)*
b Electron microscopy of induction systems. *Hyla regilla (Anura)*
c Development of photoreceptors. *Helix aspersa (Gastropoda)* (and other *Invertebrata*)

EAYRS, J. T. Ph.D., D.Sc., Prof. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a Effects of hormones on central nervous development. *Rodentia*

EBERT, J. D. Ph.D., Prof. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
— Dept. of Biol., Johns Hopkins Univ., Charles & 34th Sts., BALTIMORE, Md. 21218, U.S.A. •
a The metabolic characteristics of the heart-forming areas of the early embryo. *Gallus gallus (Aves)*
b The graft-versus-host reaction and development of immune mechanisms in the embryo. *Gallus gallus (Aves)*
c Animal viruses (esp. tumor viruses) as tools in studying embryonic development. *Gallus gallus (Aves)* (in collaboration with R. J. HAY and Mrs. M. YOSHIKAWA-FUKADA)

ECHAVE LLANOS, J. M. M.D., Prof. — Cat. "B" de Embriol., Biol. e Histol., Fac. de Cienc. Med., Univ. Nac. de La Plata, 60 y 120, LA PLATA, Argentina

ECKSTEIN, P. M.D., D.Sc. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a Mode of action of intra-uterine devices: 1. ovum recovery at critical stages of primate cycle. 2. composition of tubo-uterine secretions. 3. tissue reactions to intra-uterine materials. *Oryctolagus cuniculus (Lagomorpha), Macaca mulatta, Papio papio (Primates, Mammalia)*

EDDS, M. V., Jr. Ph.D., Prof. — Div. of Biol. and Med. Sci., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A. •

EDE, D. A. Ph.D. — Embryol. Sect., A.R.C. Poultry Research Centre, King's Buildings, West Mains Rd., EDINBURGH 9, Scotland, U.K.
a Analysis of the action of inherited abnormalities and lethal genes in development. *Gallus gallus (Aves)*
b Experimental studies on limb bud development. *Gallus gallus (Aves)*
c Cell adhesion and movement, and cell death and degeneration in normal and mutant embryos. *Gallus gallus (Aves)*

EDSTRÖM, J.-E. — Dept. of Histol., Karolinska Inst., S-140 01 STOCKHOLM 60, Sweden
a Intranuclear RNA metabolism of polytene nuclei. *Chironomus tentans (Diptera)*

EDWARDS, J. G. Ph.D. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a Studies of the formation of cell adhesions in embryonic cells and cell lines grown in culture, using reaggregation techniques.

EDWARDS, R. G. D.Sc. — Physiol. Lab., Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3EG, England.
a Genetics and embryology of pre-implantation stages. *Homo sapiens (Primates)* and other *Mammalia*
b Immunology of reproduction. *Homo sapiens (Primates)* and other *Mammalia*

EFREMOVA, Mrs. S. M. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.
a Morphology and biochemistry of somatic embryogenesis (microcinematography, histology, autoradiography). *Ephydatia fluviatilis, Spongilla lacustris (Porifera)*

EGAMI, N. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9, CHIBA, (280) Japan
a Change in radiation-sensitivity during embryonic development. *Oryzias latipes (Teleostei)*
b Embryology of endocrine organs. *Oryzias latipes (Teleostei)*
c Effect of ionizing radiation on embryos. *Oryzias latipes (Teleostei)*

EGELHAAF, A. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
a Genetische Grundlagen der Differenzierung von Augenpigmenten. *Ephestia kühniella (Lepidoptera)*
b Morphogenetische Genwirkungen. *Ephestia kühniella (Lepidoptera), Drosophila melanogaster (Diptera)*
c Genetik und Physiologie der Blutproteine im Entwicklungsverlauf. *(Insecta)*

EGUCHI, G. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

EHN, J. A. Fil.Dr. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Effects of sulphydryl-blocking and other substances on development of the embryo. *Agelena labyrinthica (Arachnoidea)*
b Animalization and vegetalization of the embryo by means of chemical agents. *Agelena labyrinthica (Arachnoidea)*

EICHER, Miss E. M. Ph.D. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A.
a Influence of nucleic acid analogues on development. *Anagasta (= Ephestia) kühniella (Lepidoptera)*
b Development of enzymes and proteins. *Anagasta (= Ephestia) kühniella (Lepidoptera)*
c Developmental consequences of chromosome rearrangements. *Mus musculus (Rodentia)*

EIDMANN, H. H. Fil.Dr., Dr.phil.nat., Prof. — Dept. of Forest Entomol., The Royal Coll. of Forestry, S-104 05 STOCKHOLM 50, Sweden
a Physiology of postembryonic development and diapause; coldhardiness of developmental stages. *Coleophora laricella (Lepidoptera), Hylobius abietis (Coleoptera)*
b Physiology of embryonic development. *Carausius morosus (Cheleutoptera)*

EISENBERG (ZALIK), Mrs. S. Ph.D. — Dept. of Zool., Fac. of Sci., Univ. of Alberta, EDMONTON, Alta., Canada
a Study of DNA synthesis during the process of lens regeneration. *Triturus viridescens (Urodela)*
b In vitro culture of the lens regenerating system. *Triturus viridescens (Urodela)*
c The cell cycle and its relation to differentiation in the lens regenerating system. *Triturus viridescens (Urodela)*
d Cell contact and migration during gastrulation. *Xenopus laevis (Anura)*

ELBERS, P. F. Ph.D. — Biol. Ultrastruct. Research Unit, State Univ., Janskerkhof 3, UTRECHT, Netherlands
a Experimental morphology of cell membrane and cytoplasmic structures in early developmental stages. *Limnaea stagnalis (Pulmonata, Gastropoda)*

EL-EISHI, H. I. S. B.Ch. — c/o Prof. Shafik Aggaw, 24 Elnahdh St., DOKI-CAIRO, Egypt

ELGAMMAL, A. E. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt

ELGER, W. M.D. — Schering AG., Müllerstrasse 170-172, 1-BERLIN 65, W.Germany
a Experiments on sex differentiation, using androgens and antiandrogens; the possible occurrence of two sex inductors. *Oryctolagus cuniculus (Lagomorpha), Mus musculus, Rattus norvegicus (Rodentia)*
b Immunology of embryonic gonads. *Oryctolagus cuniculus (Lagomorpha), Mus musculus, Rattus norvegicus (Rodentia)*

ELIAS, S. Dr.chem.Sci. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania
a Biochemistry of the subembryonic liquid. *Gallus domesticus (Aves)*
b Biometry of the early developmental stages. *Gallus domesticus (Aves)*
c Time lapse cinematography. *Gallus domesticus (Aves)*

ELIASSON (KLEIN), Mrs. E. Fil.Dr. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden
a Enzyme induction and repression, particularly arginase. *Gallus* spec. *(Aves)*
b Induction and repression of enzyme synthesis in cells in tissue culture. *(Mammalia)*

ELLIS, C. H., Jr. Ph.D. — Dept. of Biol., Amherst Coll., AMHERST, Mass. 01002, U.S.A.
a Developmental physiology and genetics: 1. involvement of larval spicule protein in the calcification process. 2. control of the synthesis of this protein (effects of dactinomycin and other inhibitors at various developmental stages). 3. spicule formation by dissociated and reaggregated embryonic cells. *Strongylocentrotus purpuratus, Arbacia punctulata, Lytechinus pictus (Echinoidea)*
b Developmental physiology: 1. study of ectodermalization and mesodermalization (animalization and vegetalization) in embryos. 2. specific protein synthesis in normal and ex-

perimental developmental stages. 3. response to morphogenetically active agents at the level of gene expression. *Strongylocentrotus purpuratus (Echinoidea)*

ELMER, W. A. Ph.D. — Dept. of Biol., Emory Univ., ATLANTA, Ga. 30322, U.S.A.

a Differentiation of eye lens fiber cells: 1. stability increase of the proteins which control the turning on of macromolecular synthesis. 2. control of various RNA species by the different regulator molecules. *Bos taurus (Artiodactyla)*

b Genetic control of chondrogenesis on the macromolecular level in the creeper mutation (cell cycle times of genotypically different chondrocytes). *Gallus domesticus (Aves)*

ELSDALE, T. R. Ph.D. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.
— Clin. and Popul. Cytogenet. Research Unit, Western Gen. Hosp., EDINBURGH, Scotland, U.K.

a Morphogenesis in cell cultures. *Homo sapiens (Primates)*

EMANUELSSON, H. Fil.Dr. — Zoophysiol. Inst., Univ. of Lund, Helgonavägen 3, 223 62 LUND, Sweden

a DNA-synthesis and yolk formation during ovogenesis. *Ophryotrocha labronica (Polychaeta)*

b Yolk-DNA metabolism during early embryogenesis. *Ophryotrocha labronica (Polychaeta)*

c Biochemical and cytochemical analysis of intracellular yolk granules in early blastoderms with special regard to yolk DNA. *Gallus domesticus (Aves)*

EMELIANOV, S. V. Dr.biol.sci., Prof. — A. N. Severtzov Inst. of Evol. Morphol. and Ecol. of Anim., Acad. of Sci. of the U.S.S.R., Lenin Ave. 33, MOSCOW W.71, U.S.S.R.

a Heterochrony in appearance and rate of development of dorsal and anal fin elements (radialia, musculature, fin rays, fin folds). *Salmo salar, Esox lucius, Tetragonopterus rubropictus, Rutilus rutilus, Callichthys fasciatus, Haplochilus pleferi, Perca fluviatilis, Atherina hepsetus (Teleostei)*

b Early postembryonic development and individual variability. *Acipenser guldenstädtii, A. stellatus, A. nudiventris, Huso huso, (Chondrostei)*

EMERIT, M. Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Montpellier, Place Eugène Bataillon, 34 MONTPELLIER, France

a Embryonic and post-embryonic development. *Gasteracantha* spec., *Isoxya* spec., *Acrosomoides* spec. *(Gasteracanthidae, Araneida, Arachnida)*

EMERY, J. L. M.D. — Depts. of Child Health and Pathol., Congenital Anomalies Res .Unit. Children's Hosp., Univ. of Sheffield, Western Bank, SHEFFIELD 10, England

EMMERT, W. Dr.rer.nat. — Zocl. Inst. I, Fac. of Nat. Sci., Univ. of Würzburg,, Röntgenring 10, 87 WÜRZBURG, W.Germany

a Postembryonic development and metamorphosis of holometabolic forms. *Formica polyctena (Hymenoptera), Calliphora erythrocephala (Diptera)*

ENDO, A. M.D. — Dept. of Hygiene, School of Med., Niigata Univ., NIIGATA-City, Japan

ENDO, Y. D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan

a Study of fertilization and development. *(Echinoidea)*

b Electron microscopical study of oogenesis. *(Echinoidea)*

ENEMAR, E. A. W. Prof. — Dept. of Zool., Univ. of Gothenburg, Fjärde Långgatan 7B S-413 05 GOTHENBURG, Sweden

a Development of hypothalomo-hypophysial connections. *(Tetrapoda)*

ENGELS, W. Dr.rer.nat. — Zool. Inst. der Westf. Wilhelms-Univ., Badestr. 9, 44 MÜNSTER/Westf., W.Germany

a Speed of yolk formation: composition of reserve proteins (radio-isotopical methods). *Apis mellifera (Hymenoptera)*

b Regulation and enzymatic conditions of glycogen synthesis in oogenesis (radio-isotopical methods). *Musca domestica (Diptera)*

ENGLAND, Mrs. M. A. B.A. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England

a Primary neural induction. *Gallus domesticus (Aves)*

b An electron microscopical and histochemical analysis of yolk formation. *Gallus domesticus (Aves)* (in collaboration with Mr. M. R. BELLAIRS)

ENGLÄNDER, H. Dr.med., Dr.rer.nat., Prof. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W. Germany

a Regionalspezifische Induktion. *(Urodela)*

b Die Wirkung von Lithium auf die Differenzierungsleistung des Ektoderms *(Urodela)*

c Disaggregation un Reaggregation von frühembryonalem Gewebe. *(Urodela)*

ENNABLI, E. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

EPEL, D. Ph.D. — Dept. of Biol. Sci., Hopkins Marine Station, Stanford Univ., PACIFIC GROVE, Calif. 93950, U.S.A.

a Biochemistry and physiology of fertilization, especially activation of enzymes (NAD kinase), formation of extracellular cements, and mechanism of lysis of cortical granules. *Strongylocentrotus purpuratus (Echinoidea)* and other marine spp. *(Invertebrata)*

b Control of enzyme synthesis during development. *Strongylocentrotus purpuratus (Echinoidea)*

ERHART, E. A. M.D., Ph.D., Prof. — Sect. of Neuroanat., Dept. of Anat., Univ. of São Paulo, Caixa Postal 2921, SÃO PAULO, Brazil

a Degeneration and regeneration of peripheral nerve fibres. *Gallus domesticus (Aves), Canis familiaris (Carnivora)*

ERICSON (STRANDVIK), Mrs. B. Cand.Med. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden

ERIKSSON, Miss M. M.D. — Lab. of Teratol., Karolinska Inst., S-104 01 STOCKHOLM 60, Sweden

a Induced fetal damage late in pregnancy of special interest for animal tests of new drugs. *Mus musculus (Rodentia)*

ERNSTRÖM, U. M.D. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden

ESCHENBERG, Miss K. M. Ph.D., Prof. — Dept. of Biol. Sci., Clapp Lab., Mount Holyoke Coll., SOUTH HADLEY, Mass. 01075, U.S.A.

a Cytology and developmental physiology of the ovary (histochemistry and autoradiography). *Gerris remigis, Belostoma flumineum, Ranatra fusca (Hemiptera)*

ESHEL, Mrs. Sh. M.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

a The effect of injury on embryo formation in folded blastoderms. *Gallus domesticus (Aves)*

ETKIN, W. Ph.D., Prof. — Dept. of Anat., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Rd. and Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

ETOH, H. Dr.Agric. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan

a Long term effects of low doses of ionizing radiation on various embryonic stages. *Oryzias latipes (Teleostei)*

EVANS, H. E. Ph.D., Prof. — Dept. of Anat., Vet. Coll., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

a General embryology. *Canis familiaris (Carnivora)*

b Study of skeletal development in regard to inter-litter variation and position in the uterus, utilizing cesarian removals. *Canis familiaris (Carnivora)*

c *Veratrum* induced cyclopia. *Ovis aries (Artiodactyla)*

d Serial sections of embryos at spaced ages, available for inspection. *Canis familiaris, Felis catus (Carnivora), Bos taurus, Ovis aries (Artiodactyla)*

EVANS, M. J. M.A. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England

a Changes in messenger RNA associated with primary embryonic induction. *Xenopus laevis (Anura)*

b Study of teratoma cells in vitro. *(Mammalia)*

c RNA metabolism in creeper (Cp) mutation. *Gallus domesticus (Aves)*

EVREN, A. Dr.Vet. — Inst. of Histol. and Embryol., Vet. Fac., Ankara Univ., ANKARA, Turkey

EWART, D. F. M.Sc. — Dept. of Embryol., Marischal Coll., Univ. of Aberdeen, ABERDEEN AB9 1AS, Scotland, U.K.

a Effect of rat liver RNA (characterized by polyacrylamide gel electrophoresis) on chick fibroblasts in vitro (electron microscopy). *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

EWEN, AL. B. Ph.D. — Research Station, Research Branch, Canada Agriculture, Univ. Campus, SASKATOON, Sask., Canada

a Physiology and functional morphology of reproduction, with special emphasis on the endocrinology of reproduction in males. *Melanoplus sanguinipes (Orthoptera)*

b Histology and histochemistry of neurosecretory cells and their cycles of activity. *Melanoplus sanguinipes (Orthoptera)*

EYAL (GILADI), Mrs. H. Ph.D. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel •

a Embryo formation in folded blastoderms. *Gallus domesticus (Aves)*

b An attempt to alter the developmental direction of unincubated blastoderms by artificially creating multilayered systems. *Gallus domesticus (Aves)*

EYRIES, Ch. Dr.en Méd. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

FABER, J. Ph.D. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands •

a Gene action and differentiation of imaginal discs in homoeotic mutants. *Drosophila melanogaster (Diptera)*

b Limb regeneration: 1. interactions between transplanted blastemal mesenchyme and wound epidermis. 2. regional organization in transplanted blastemas. *Ambystoma mexicanum (Urodela)*

FAINSTAIN (HAMERMAN), Mrs. N. B.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
a The role of the endoblast in the heart formation. *Gallus domesticus (Aves)*
FALEEVA, Miss T. I. — Biol. Inst., Leningrad State Univ., LENINGRAD B-164, U.S.S.R.
a Maturation of eggs, atresia of ovarian follicles, and regulation of these processes. *Acipenser ruthenus, A. stellatus (Chondrostei), Rutilus rutilus, Pelecus cultratus (Cypriniformes), Acerina cernua, Macropodus opercularis, Hemichromis bimaculatus (Perciformes, Teleostei)*
FALEIRO PIMENTEL, Mrs. M. B.Sc. † — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4° andar, C.P. 253, BELO HORIZONTE, M.G., Brazil (deceased)
FALIN, L. I. M.D., Prof. — Dept. of Histol. and Embryol., Moscow Stomatol. Inst., Kaljaevskaiia 18, MOSCOW, U.S.S.R.
a Development and cytodifferentiation of endocrine glands. *Homo sapiens (Primates)*
b Origin and development of germ cells (histochemical techniques). *Homo sapiens (Primates)*
c Development and innervation of teeth. *Homo sapiens (Primates)*
FALLIERI, L. A. B.Sc. — Dept. de Biol. Geral. Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4°andar, C.P. 253, BELO HORIZONTE, M.G., Brazil
a DNA and nuclear size during postembryonic development (liver, salivary glands and prostata). *Biomphalaria (= Australorbis) glabrata* and other spp. *(Pulmonata, Gastropoda)*
FALLON, J. F. Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.
a Cell death during limb morphogenesis. *(Vertebrata)*
b Ultrastructure of the gametes before and during interaction. *Nereis limbata (Polychaeta)*
FAMBROUGH, D. M., Jr. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Ontogeny of nerve - muscle interactions. *Rattus norvegicus (Rodentia)*
FANGHÄNEL, J. Dr.med. — Anat. Inst. der Univ. Rostock, Gertrudenstr. 9, 25 ROSTOCK 1, East.Germany
a Experimentelle Untersuchungen zur Frage von Organ- und Schädelveränderungen auf Grund statischer Veränderungen in der Postnatelperiode (Amputation der Vorderextremitäten). *Rattus norvegicus (Rodentia)*
FANKHAUSER, G. Ph.D., Prof. — Dept. of Biol., Princeton Univ., PRINCETON, N.J. 08540, U.S.A. •
a Effects of chloramphenicol on metamorphosis. *(Urodela)*
FANTONI, A. M.D. — Lab. di Radiobiol. Anim., C.S.N.-Casaccia, Casella Postale 2400, 00100 ROMA, Italy
a Characterization of yolk sac erythropoiesis and liver erythropoiesis from 8th to 15th day of gestation; evidence for a different genetic expression in the two cell lines. *Mus musculus (Rodentia)*
b Molecular biology of differentiation of yolk sac derived erythroid cells: 1. patterns of RNA, total protein and hemoglobin synthesis. 2. cell division in relation to hemoglobin synthesis and to the dependance of hemoglobin synthesis from continued mRNA synthesis. 3. synthesis of ribosomes, passage of ribosomal subunits from nuclei to cytoplasm during yolk sac erythroid differentiation. *Mus musculus (Rodentia)*
FARAG, A. E. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt, U.A.R.
FARBEROV, A. I. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.
FARGEIX, N. Dr.ès Sci. — Lab. de Biol. Anim., 1 Av. Vercingétorix, 63 CLERMONT-FERRAND, France
a Les cellules germinales chez l'embryon. *(Aves)*
FARINELLA (FERRUZZA), Mrs. N. Dr.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a The development of unfertilized aged eggs. *(Ascidiae)*
b The development of fused eggs. *(Ascidiae)*
c RNA synthesis. *(Ascidiae)*
FAULHABER, Miss I. E. W. Ph.D. — Inst. für Physiol. Chemie, Freie Univ. Berlin, Arnimallee 22, 1 BERLIN 33, W.Germany
a Isolation and biochemical characterization of the primary induction factor in the gastrula. *Xenopus laevis (Anura)*
b Protein and nucleic acid metabolism during the process of differentiation. *Xenopus laevis (Anura), Triturus alpestris, Ambystoma mexicanum (Urodela)*
FAURÉ-FREMIET, E. Dr., Prof.hon. — Lab. d'Embryol. Expér. du Coll. de France, Place M. Berthelot, 75 PARIS Ve, France •
FAUSTOV, V. S. Cand.biol.sci. — Lab. of Developm. Biophys., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.
FAUTREZ, J. C. M.D., Prof. — Lab. of Anat., Univ. of Gent, Ledeganckstr. 35, GENT, Belgium •

FAUTREZ (FIRLEFYN), Mrs. N. J. — Lab. of Anat., Univ. of Gent, Ledeganckstr. 35, GENT, Belgium

FEDECKA-BRUNER, Mrs. B. Dr.ès Sci. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94 NOGENT-sur-Marne, France

FEDINEC, A. A. Ph.D., Prof. — Dept. of Anat., College of Basic Med. Sci., Med. Units, Univ. of Tennessee, 62 S. Dunlap St., MEMPHIS, Tenn. 38103, U.S.A.

a Study of effect of bacterial toxins and pathogenic bacteria on the development of the fetus; relation between the routes of infection and barrier properties of placenta and fetal membranes. *Rattus norvegicus (Rodentia)*

FEDOROFF, S. Ph.D., Prof. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Sask., Canada

a Cytogenetics

b Cytogenetics and cytocidal systems

c Development of cell surface antigens

FELDMAN, M. Ph.D. — Dept. of Cell Biol., Weizman Inst. of Sci., REHOVOTH, Israel •

FELIX, J.-M. D.E.S. — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France

a Endocrine function of the foetal pancreas; insulin blood levels in the foetus and in the mother. *Rattus norvegicus (Rodentia)* (in collaboration with R. L. JACQUOT, B. C. J. SUTTER and Mrs. M. T. SUTTER (DUB))

FELL, Dame Honor B. Dr., Prof. — Strangeways Research Lab., Wort's Causeway, CAMBRIDGE, England •

FELTS, W. J. L. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

FENNELL, R. A. Ph.D., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.

FERM, V. H. M.D., Ph.D., Prof. — Dept. of Anat.-Cytol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

a Teratogenic effects of heavy metals. *Mesocricetus auratus (Rodentia)*

b Experimentally induced twinning. *Mesocricetus auratus (Rodentia)*

FERNANDEZ de RECONDO, Mrs. M. E. — Inst. de Invest. Bioquim., Fundacion Campomar, Obligado 2490, BUENOS AIRES, Argentina

FERREIRA, A. L. M.D., Ph.D. — Dept. de Morfol. Hum. Func. e Aplic., Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, RIBEIRÃO PRÊTO, S.P., Brazil (no embryological work in progress)

FERRIER, V. Lic.ès Sci. — Lab. de Biol. Génér., Fac. des Sci., 118 Route de Narbonne, 31 TOULOUSE (04), France

a Hybridation intergénérique. *(Urodela)*

b Gynogenèse. *Pleurodeles waltlii (Urodela)*

FESZT, T. M.D. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str. Gh. Marinescu 38, TÎRGU-MUREŞ, Romania

FICQ, Mrs. A. A. D.Sc., Prof. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium

a Etude autoradiographique du métabolisme au cours de l'oogenèse. *Asterias* spec. *(Asteroidea, Echinodermata), Rana* spec. *(Anura)*

b Observations autoradiographiques sur l'oogenèse et la morphogenèse. *Pleurodeles* spec., *Triturus* spec. *(Urodela), Rana fusca (Anura)*

c Studies on metabolism during maturation. *Asterias rubens, Arbacia lixula, Paracentrotus lividus (Echinodermata), Pleurodeles waltlii (Urodela)*

d Effects of actinomycin D and histones on early differentiation of oocytes. *Xenopus laevis (Anura)*

e DNA synthesis during early oogenesis. *Xenopus laevis (Anura)*

FILOGAMO, G. M.D., Prof. — Dept. of Anat., Univ. of Turin, Corso M.D'Azeglio 52, 10126 TORINO, Italy •

a Histogenesis of the intramural plexuses. *(Mammalia)*

b Development of olfactory placode. *(Mammalia)*

FILONI, S., Dr.Biol.Sci. — Ist. di Anat. Comp. "Battista Grassi", Fac. di Sci., Univ. di Roma, Via A. Borelli 50, 00161 ROMA, Italy

a Regeneration of central nervous system. *Xenopus laevis (Anura)*

FILOSA, M. F. Ph.D., Prof. — Dept. of Zool., Scarborough Coll., Univ. of Toronto, WEST HILL, Ont., Canada

FIMIAN, W. J., Jr. Ph.D., Prof. — Dept. of Biol., Boston Coll., CHESTNUT HILL 67, Mass., U.S.A.

FINE, M. H. Ph.D. — Charles F. Kettering Research Labs., 150 E. South College St., YELLOW SPRINGS, Ohio 45387, U.S.A.

a Differentiation of tracheary elements in tissue cultures, especially hormonal control of secondary wall formation and lignogenesis. *Eucalyptus camaldulensis (Myrtaceae)*

FINGER, I. Ph.D., Prof. — Dept. of Biol., Haverford Coll., HAVERFORD, Pa. 19041, U.S.A.

a Immunogenetic studies in relation to cell differentiation. *Paramecium aurelia (Ciliata)*

FINNEGAN, C. V. Ph.D., Prof. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Analysis of postgastrula axial mesoderm differentiation in vitro. *Taricha torosa, Ambystoma gracile (Urodela), Gallus domesticus (Aves)*

b Cytochemical and electron microscopic examination of myoblast, endo- and ectomesenchymal differentiation. *Taricha torosa, Ambystoma gracile (Urodela)*

c Molecular and cellular aspects of arm formation in larvae. *Strongylocentrotus droebachiensis, S. purpuratus, S. franciscanus (Echinoidea)* (in collaboration with D. H. LARRIVEE)

d Development of alkaline phosphatase activity in embryos; biochemical analysis (specific activity, gel electrophoresis) and histochemical analysis. *Ambystoma gracile, Taricha torosa (Urodela)* (in collaboration with D. H. O'DAY)

e The effects of L-tyrosine and L-phenylalanine in the in vitro differentiation of the early (24-32 hr.) neural crest: the frequency of pigment cell differentiation in various concentrations of the two amino acids and an electron microscopic examination of the cultured cells. *Gallus domesticus (Aves)* (in collaboration with A. J. WIREN)

FIORONI, P. P.D., Dr.phil. — Zool. Anstalt der Univ., Rheinsprung 9, 4000 BASEL, Switzerland

a Development of integument (chromatophores, shell), nervous system, coelom and yolk sac (including electron microscopy). *Loligo* spec., *Alloteuthis* spec., *Sepiola* spec., *Sepietta* spec., *Sepia* spec. *(Decapoda), Eledone* spec., *Octopus* spec. *(Octopoda, Cephalopoda),* and others

b Morphological problems of embryonic nutrition (yolk, albumine, food eggs) and transitory larval organs. *(Gastropoda)*

c Morphological problems of embryonic nutrition and transitory larval organs. *(Malacostraca, Crustacea)*

d Histological normal tables of development. *(Cephalopoda, Gastropoda, Crustacea)*

FIRKET, H. M.D., Ph.D., Prof. — Lab. d'Anat. Pathol., Fac. de Méd., Univ. de Liège, 1 rue des Bonnes-Villes, LIÈGE, Belgium
(no embryological work in progress)

FIRTEL, R. A. B.A. — Dept. of Developm. Biol., Div. of Biol., Calif. Inst. of Technol., PASADENA, Calif. 91109, U.S.A.

FISCHBERG, M. Dr.phil., Prof. — Station de Zool. Expér., Univ. de Genève, Route de Malagnou 154, Chêne-Bougeries, GENÈVE, Switzerland •

FISCHER, A. Dr.rer.nat. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W. Germany

a Inheritance of eye colour in laboratory stock; maternal effect on the eye colour in juvenile mutants. *Platynereis dumerilii (Polychaeta)*

FISCHLSCHWEIGER, W. Ph.D. — Dept. of Histol. and Embryol., Coll. of Dent. Surg., Univ. of Maryland, Lombard and Green St., BALTIMORE, Md. 21201, U.S.A.

FISCHMAN, D. A. M.D. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Biosynthesis and assembly of contractile proteins.

FISHER, D. B. Ph.D. — Dept. of Botany, Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.

a Fertilization and embryogenesis. *Gossypium hirsutum (Malvaceae)*

FITCH, F. W. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Cell interactions in immune response.

FITZGERALD, L. R. Ph.D., Prof. — Dept. of Anat., College of Basic Med. Sci., Med. Units, Univ. of Tennessee, 62 S. Dunlap St., MEMPHIS, Tenn. 38103, U.S.A.

a Effects of environmental factors and antibiotics on development of teeth, and control mechanisms of tooth formation. *Mus musculus (Rodentia)*

b Cytology of amniotic fluid: sources of the various types of cells, and relation of changes in these types to normal or abnormal development. *Homo sapiens (Primates)*

FLAMM, H. M.D., Prof. — Hygiene Inst., Med. Fac., Univ. of Vienna, Kinderspitalgasse 15, Postfach 23, A-1095 VIENNA, Austria

a Infections of the blastocyst by viruses: fate of the blastocyst and embryo, duration of presence of the virus in the blastocyst. *Oryctolagus cuniculus (Lagomorpha)*

b Infections of fetus and placenta. *Homo sapiens (Primates)*

FLEISCHHAUER, K. Dr.med., Prof. — Anat. Inst. der Univ. Bonn, Abt für Neuroanat., Nussallee 10, 53 BONN, W.Germany

a Postnatal development of neuroglia. *Felis domestica (Carnivora), Homo sapiens (Primates)*

b Postnatal development of various subcortical regions and of the spinal cord. *Felis domestica (Carnivora), Homo sapiens (Primates)*

c Reaction to injury of nervous tissue, particularly neuroglia, during postnatal development. *Felis domestica (Carnivora)*

FLICKINGER, C. J. M.D. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A.

FLICKINGER, R. A. Ph.D., Prof. — Dept. of Biol., State Univ. of New York, 102 Health Sci. Bldg., BUFFALO, N.Y. 14214, U.S.A. •

FLINT, O. P. B.A. — Embryol. Sect., A.R.C. Poultry Research Centre, King's Buildings, West Mains Rd., EDINBURGH 9, Scotland, U.K.
a Behaviour and differentiation of normal and mutant limb mesenchyme cells in vitro. *Gallus gallus (Aves)*

FLYNN, T. THOMSON D.Sc., Prof. — Address unknown •

FOLLENIUS, E. Dr.ès Sci. — Lab. de Zool. et d'Embryol. Expér., Univ. de Strasbourg, 12 rue de l'Université, STRASBOURG, France

FOOTE, Mrs. F. MARTINDALE Ph.D. — Dept. of Physiol., Southern Illinois Univ., CARBONDALE, Ill. 62901, U.S.A. •
a Growth and maintenance of gonads of metamorphosing larvae in organ cultures. *Xenopus laevis (Anura)*
b Growth and maintenance of gonads on synthetic media, and on standard media composed of chick embryo extract and agar. *Xenopus laevis (Anura)*
c Growth of avian thymus in vitro. *Gallus domesticus (Aves)*

FORD, P. Ph.D., Prof. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada
a Developmental histochemistry. *Raja binoculata (Selachii)*
b Development of the tail, employing isolates in vitro. *Ambystoma gracile (Urodela)*
c Microspectro-photometric studies on enzyme concentrations in development. *Raja binoculata (Selachii)*
d Ultrastructure of the development of the yolk sac. *Raja binoculata (Selachii)* (in collaboration with Mrs. E. J. HALL)

FORD, P. J. D.Phil. — Natl. Inst. for Med. Research, Mill Hill, LONDON N.W.7, England
a The synthesis of proteins by ovary in organ culture. *Xenopus laevis (Anura), Mus musculus (Rodentia)*
b The structure and function of ribosomes during cell differentiation. *Xenopus laevis (Anura)*

FORET, J. E. Ph.D. — Dept. of Zool., Univ. of New Hampshire, DURHAM, N.H. 03824, U.S.A.
a Radioautographic studies of limb regeneration. *Ambystoma* spec. *(Urodela)*
b In vitro cultivation of larval and adult tissues and regeneration blastema. *Ambystoma* spec. *(Urodela)*
c Cellular origin of spinal cord reconstitution. *Ambystoma* spec. *(Urodela)*

FORNI, Miss S. Med.Dott. — Ist. di Istol. ed Embriol. Gen., Univ. di Milano, Via Ponzio 7, MILANO, Italy

FORREST, H. S. Ph.D., Prof. — Dept. of Zool., The Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.
a Analysis of DNA and RNA synthesis and changes in pteridines in developing eggs. *Oncopeltus fasciatus (Hemiptera)*

FORSBERG, J.-G. Prof. — Inst. of Anat., Univ. of Bergen, BERGEN, Aarstadvollen, Norway
a Studies on regulative mechanisms behind epithelial differentiations in the genital region
b Studies on the antigen content of the Müllerian epithelium
c Influence of antiandrogenic substances on the differentiation of the male genital tract
d Heterologous transplantation

FORTAK, W. M.D. — Dept. of Histol. and Embryol., Acad. of Med., ul.Narutowicza 60, ŁÓDŹ, Poland
a Comparative morphochemical studies on the development of the adrenal gland. *Xenopus laevis (Anura), Rattus norvegicus (Rodentia)*
b The distribution and activity of some hydrolytic enzymes in various tissues and organs during metamorphosis and embryogenesis. *Xenopus laevis (Anura), Rattus norvegicus (Rodentia)*
c Comparative studies on the development of local hypersensitivity reactions in the skin (electron microscopic and immunohistological techniques). *Rana esculenta (Anura), Cavia cobaya (Rodentia), Homo sapiens (Primates)*
d Histologic and histochemical studies on adrenal gland regeneration. *Rattus norvegicus (Rodentia)*

FOSSARD, R. A. de M.Sc. — Dept. of Bot., Univ. of New England, ARMIDALE, N.S.W., Australia

FOSTER, M. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
a Pigment genetics. *Mus musculus, Peromyscus maniculatus (Rodentia)*
b Blood group inheritance and antibody synthesis. *Mus musculus (Rodentia)*

FOURCHE, J. Dr.ès Sci. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Le métabolisme respiratoire au cours du développement. *Drosophila melanogaster (Diptera), Bombyx mori (Lepidoptera)*

FOURNIER, B. Dr.Biol.anim. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France

a Recherches descriptives et expérimentales sur la morphogenèse embryonnaire des appendices. *Carausius* spec. *(Cheleutoptera)*

FOWLER, J. A. Ph.D. — Dept. of Biol., State Univ. of New York at Stony Brook, STONY BROOK, N.Y. 11790, U.S.A.
a Development of hybrids. *Rana pipiens (Anura)*
b Developmental controls (genetic, environmental). *Oryzias latipes (Teleostei)*

FOX, A. S. Ph.D., Prof. — Dept. of Genet., Coll. of Agric., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.

FOX, H. Ph.D., D.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
a Investigation of growth and degeneration of the pronephric system by electron microscopy. *(Anura)*
b Grafting experiments in larvae, of pronephros and mesonephros under hypo- and hyperthyroid conditions. *Rana temporaria (Anura)*
c Investigation of haploid and diploid tissues by electron microscopy (in collaboration with Miss L. HAMILTON, Middlesex Hospital Medical School, London). *Xenopus laevis (Anura)*
d Tail degeneration (electron microscopy). *Rana temporaria (Anura)*

FRAGATA, M. Ph.D. — Dept. of Plant Sci., Fac. of Agric., Univ. of Manitoba, WINNIPEG 19, Manitoba, Canada
a Effects of auxins and cytokinins on embryo development. *(Gramineae)*

FRANCHI, L. L. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a Fine structure of normal and irradiated male and female germ cells. *(Rodentia; Primates)*
b Structure and function of chromosomes in oocytes in relation to radiosensitivity. *(Mammalia)*

FRANCIS, D. W. Ph.D. — Dept. of Zool., Univ of British Columbia, VANCOUVER 8, B.C., Canada
a Study of the overall character of the sequence of gene controlled processes during cell differentiation, using the enzyme complement of developmental mutants. *(Acrasiales)*
b Effect of 3', 5'-adenosine monophosphate (cyclic AMP) on ion transport. *Dictyostelium discoideum (Acrasiales)* (in collaboration with Miss YEA-YUAN CHI)
c Microspectro-photometric analysis of pseudoplasmodial differentiation. *Dictyostelium discoideum (Acrasiales)* (in collaboration with R. M. HUNTER)

FRANÇOIS, Y. Dr.ès Sci., Prof. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France
a Development of paired fins. *(Teleostei)*
b Development of vertebrae. *Polypterus* spec. *(Dipnoi), (Teleostei)*
c Growth of embryo. *(Teleostei)*
d Evolution of bone structures. *(Osteichthyes)*

FRANK, G. H. D.Sc. — Dept. of Zool., Univ. Coll., Private Bag 4001, DURBAN, S.Africa
a A study of certain aspects of the development of the chondrocranium and osteocranium, with special reference to the morphology of the sound conducting apparatus. *Crocodilus niloticus (Crocodilia)*

FRANKEL, J. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Morphogenesis. *Tetrahymena* spec. *(Holotricha, Ciliata)*

FRANKLIN, L. E. Ph.D. — Delta Region. Primate Research Center, Tulane Univ., COVINGTON, La. 70433, U.S.A.
a Electron microscope studies of gametes and fertilization. *(Annelida; Echinodermata; Mammalia)*

FRANZÉN, Å. S. Fil.Dr. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Comparative study of the spermatozoon and spermatogenesis. *(Invertebrata)*
b Larval development. *(Brachiopoda; Entoprocta)*

FRASCHINI, Miss A. Ph. D., Prof. — Inst. of Histol. and Embryol., Univ. of Pavia, Piazza Botta 10, 27100 PAVIA, Italy
a Enzyme histochemistry of yolk sac. *Gallus domesticus (Aves)*
b Studies on larval gastric epithelium. *Rana esculenta (Anura)*
c The cutaneous glands in metamorphosis (histochemical methods). *Rana esculenta (Anura)*
d Histology, histochemistry and enzymology of the yolk sac (stages: 2 cm, 7 cm and onwards). *Scyliorhinus stellaris (Selachii)*
e Histology and histochemistry of granular glands of larval and adult skin. *Siredon mexicanum (Urodela)*

FRASER, F. C. Ph.D., M.D., F.R.S.C., Prof. — Human Genet. Sect., Dept. of Genet., McGill Univ., MONTREAL, Que., Canada

FRASER, R. C. Ph.D., Prof. — Dept. of Zool. and Entomol., Univ. of Tennessee, KNOXVILLE, Tenn. 37916, U.S.A.
a Biosynthesis of hemoglobins in the embryo and characteristics of embryonic erythroid cells. *Gallus domesticus (Aves)*

FRATELLO, B. D.Sc. — Ist. di Anat. Comp., Univ. di Modena, Via Berengario 14, 41100 MODENA, Italy
a Cellular growth and mitotic ratio in peripheral nervous system. *(Amphibia)*
b Developmental biology. *Acerentomon microrhinus (Protura, Insecta)*
c Proteolytic pattern in the developing digestive apparatus. *Rana* spec. *(Anura), Triturus* spec. *(Urodela), Gallus domesticus, Columba* spec. *(Aves)*

FREED, J. Ph.D. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A.
a Genetics of haploid embryo cell lines including analysis by nuclear transfer. *Rana pipiens (Anura)* (in collaboration with Mrs. L. MEZGER-FREED)
b Motility and ultrastructure of cultured cells. *Rana pipiens (Anura), Triturus viridescens (Urodela)*

FREEMAN, G. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Regeneration and asexual reproduction

FRENCKELL, M. von Lic.ès Sci. — Lab. de Biochim., Univ. de Liège, 17 Place Delcour, LIÈGE, Belgium
a Mécanismes biochimiques de l'oogenèse. *Xenopus laevis (Anura)*

FRETTER, Miss V. Ph.D., D.Sc. — Dept. of Zool., Fac. of Sci., Univ. of Reading, London Road, READING, Berks. RG1 5AQ, England
a Veliger larvae of coastal waters: structure, feeding, food requirements, digestion, structural changes at metamorphosis. Many spp. *(Prosobranchia, Gastropoda)*

FRIANT, Mrs. M. Dr.ès Sci., Dr. en Méd., Prof. — Ecole d'Anthropologie, 1 Place d'Iéna, PARIS XVIe, France
a Development of the skeleton. *(Reptilia; Aves; Mammalia)*
b Development of the teeth. *(Mammalia)*
c Development of the brain. *(Mammalia)*
d Development of pterylosis. *(Aves)*
e Development of cartilage, bone and horn. *(Vertebrata)*
f Development of Meckel's cartilage. *(Mammalia), Homo sapiens (Primates)*

FRIED (MONTAUFIER), Mrs. M. C. D.E.S. — Lab. de Génét. Evol. et de Biométrie, C.N.R.S., 91 GIF-sur-YVETTE, France
a Glande androgène et évolution cyclique de l'hermaphrodisme non fonctionnel de la gonade du mâle. *Talitrus saltator (Amphipoda, Crustacea)*

FRIEDKIN, M. E. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Biochemistry of microtubular systems in relation to development of nerve tissues
b Action of pharmacological agents on development

FRIEDLÄNDER, M. Ph.D. — Lab. of Genet., Hebrew Univ., JERUSALEM, Israel
a Differentiation and function of the apyrene sperm; histochemical and electron microscope study of testes and genitalia of the inseminated female. *Bombyx mori (Lepidoptera)*

FRISTROM, Mrs. D. Ph.D. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.
a Fine structure of imaginal discs. *Drosophila melanogaster (Diptera)*

FRISTROM, J. W. Ph.D. — Dept. of Genet., Univ. of California, BERKELEY, Calif. 94720, U.S.A.

FRITZ, H. I. Ph.D. — Dept. of Biol., Div. of Sci. and Engin., Wright State Univ., Col. Glenn Highway, DAYTON, Ohio 45431, U.S.A.
a The role of the egg white in the development of the embryo. *Gallus domesticus (Aves)*
b Embryonic nutrition. *(Chelonia), Gallus domesticus (Aves), Didelphis marsupialis, Calauromys derbiana, Marmosa* spec. *(Marsupialia)*
c Experimental teratogenesis. *Gallus domesticus (Aves), (Marsupialia; Placentalia)*

FRÖHLICH, J. M.D. — Lab. of Embryophysiol., Inst. of Physiol., Fac. of Gen. Med., Charles Univ., Albertov 5, PRAGUE 2, Czechoslovakia
a Biochemical analysis of membrane ATP-ase system in developing fetal brain tissue. *(Aves)*

FRYE, B. E. Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

FUJII, R. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan
a Physiological studies on the changes in the responsiveness of melanophores during embryonic development. *Salmo irideus (Teleostei)*

FUJII, T. Ph.D., Prof. — Zool. Inst., Univ. of Tokyo, Hongo 7-3, Bunkyo-ku, TOKYO, (113) Japan
a The mechanism of chemical carcinogenesis. *Rattus norvegicus (Rodentia)*

FUJISAWA, H. M.Sc. — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan

FUKE, M. D.Sc. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan
a Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*

b Cytological properties of polar lobe. *Ostrea gigas (Lamellibranchia)*

FUKUDA, S. D.Sc., Prof. — Biol. Inst. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

FUKUSHI, T. M.Sc. — Marine Biol. Station, Tohoku Univ. at Asamushi, AOMORI-City, Japan

FULLER, M. S. Ph.D., Prof. — Dept. of Botany, Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.

a Development of motile cells in aquatic species. *Allomyces cystogenes (Saprolegniales, Phycomycetes)*

b Mitosis. *(Fungi)*

FULLILOVE, Miss S. L. Ph.D. — Dept. of Zool., Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.

a Developmental aspects of embryonic lethals. *Drosophila* spec. *(Diptera)*

b Patterning of morphogenetic information during oogenesis (techniques: ovary transplantation and isotopic labeling of developing oocytes). *Drosophila* spec. *(Diptera)*

c Heart development as studied by analyses of in vitro interactions between inducing and responding tissues. *Taricha torosa (Urodela)*

FULTON, C. M. Ph.D. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.

a Cell differentiation during ameba-to-flagellate transformation, with emphasis on the initiation of transformation and the morphogenesis of new organelles, especially flagella and basal bodies. *Naegleria gruberi (Protozoa)*

FURUSAWA, M. D.Sc. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan

a Immunological studies on the nature of male and female. *Mus musculus (Rodentia)*

b Studies on the species-specific antigenicities on the cell membrane. *Mus musculus (Rodentia)*

c Immunological analysis of the structural molecules of the erythrocyte membrane. *Mus musculus (Rodentia)*

GABAJEVA, Mrs. N. S. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

a Genesis and functional role of egg membrane. *Rana temporaria, Bufo bufo (Anura), Testudo graeca, T. horsfieldi (Chelonia), Lacerta saxicola, L. agilis, L. armeniaca, L. rostambeca, Agama caucasica (Lacertilia), Bos taurus, Ovis aries, Sus domesticus (Artiodactyla)*

b Immunity of embryo. *Rana temporaria, Bufo bufo (Anura), Testudo graeca, T. horsfieldi (Chelonia), Lacerta saxicola, L. agilis, L. armeniaca, L. rostambeca, Agama caucasica (Lacertilia), Bos taurus, Ovis aries, Sus domesticus (Artiodactyla)*

GABELLA, G. M.D. — Dept. of Anat., Univ. of Turin, Corso M.D'Azeglio 52, 10126 TORINO, Italy

a The organization and development of intestinal intramural nerve plexuses (histochemistry, electron microscopy, tracer studies). *Rattus norvegicus (Rodentia)*

GABIE (GUBBAY), Mrs. V. Ph.D. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, S.Africa

a Studies on neural crest cells in vitro. 1. Technique of culturing. 2. Staging of pigment cells. 3. Effect of thyroxine on differentiation of pigment cells. 4. Autoradiographic study of the relation between histones and RNA synthesis. *Xenopus laevis (Anura)* (in collaboration with Miss A. ANDREW, Dept. of Anat.)

GABRIEL-ROBEZ (KREMER), Mrs. O. Dr.en Méd. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France

a Chimiotératogenèse. *(Aves; Mammalia)*

GAGE, L. P. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

a Biochemical studies of early development. *Xenopus laevis (Anura)* (in collaboration with D. D. BROWN)

GAILLARD, J. A. M.D. — Dept. of Pathol., Central Lab., Centre Hospitalier Region., rue Saint-Louis, 27 EVREUX, France

a Embryonic tumors; germs cell tumors; dysembryomas of ovary and testis; blastemal tumors. *Homo sapiens (Primates)*

b Comparative developmental morphology of embryoids and first stages of normal ova. *Homo sapiens (Primates)*

c Extra-embryonic structures in embryomas. *Homo sapiens (Primates)*

GAILLARD, P. J. M.D., Prof. — Lab. for Cell Biol. and Histol., Fac. of Med., State Univ., Rijnsburgerweg 10, LEIDEN, Netherlands

a Hormones and bone development (organ culture, enzyme chemistry, isotope techniques, electron microscopy). *Gallus domesticus (Aves), Mus musculus (Rodentia)*

GALASSI, L. D.Sc. — Dept. of Physiol., Tufts Univ., 136 Harrison Ave., BOSTON, Mass. 02111, U.S.A.

GALL, J. G. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a Synthesis of RNA and DNA during oogenesis; nuclear morphology; emphasis currently on nucleoli and ribosomal RNA production. *Triturus viridescens, Ambystoma mexicanum, Xenopus laevis (Amphibia)*

b Amplification of genes coding for ribosomal RNA during oogenesis. *Xenopus laevis (Anura)*

GALLERA, J. D.Sc. — Lab. d'Embryol. Expér., Inst. d'Histol., Univ. de Genève, 20 rue de l'Ecole de Médecine, 1211 GENÈVE 4, Switzerland •

a Mechanisms involved in the induction process. *Gallus domesticus (Aves)*

b Action of actinomycin D on ectoblast competence and inductive power of Hensen's node. *Gallus domesticus (Aves)*

c Comparison between the inductive capacities of the presumptive endoblast and mesoblast cells located in the primitive streak. *Gallus domesticus (Aves)*

d Meaning of the period of latency inserted between the induction time and the beginning of neurulation. *Gallus domesticus (Aves)*

GALLIEN, L. Dr.ès Sci., Prof. — Lab. d'Embryol., Fac. des Sci. de Paris, 9 quai St. Bernard, 75 PARIS Ve, France •

GALSTON, A. W. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ.., NEW HAVEN, Conn. 06520, U.S.A.

a Analysis of molecular basis for the developmental roles of indole-3-acetic acid and of light (absorbed by phytochrome). *Pisum sativum (Papilionaceae)*

GAMBLE, H. J. Ph.D. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E. 1, England

a Development of peripheral nervous tissues in the foetus. *Homo sapiens (Primates)*

b Development of spinal cord in the foetus (electron microscopy). *Homo sapiens (Primates)*

GANGULY, B. Ph.D. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India

GANGULY, D. N. Ph.D. — Cell Research Unit, Dept. of Zool., Univ. of Calcutta, 35 Ballygunje Circular Rd., CALCUTTA-19, India

GARAVINI, Mrs. C. Dr. — Ist. di Anat. Comp., Univ. di Bologna, Via Belmeloro 8, BOLOGNA (103), Italy

GARBER (BILSKY), Mrs. B. B. Ph.D. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Epithelial-mesenchymal interactions in embryonic development.

GARCÍA AUSTT, E. M.D., Prof. — Sect. of Exper. Neurol., Inst. of Neurol., Hosp. de Clinicas, MONTEVIDEO, Uruguay

a Influence of uterine contractions on fetal EEG. *Homo sapiens (Primates)*

GARCIA-BELLIDO, A. Ph.D. — Sect. Developm. Genet., Inst. of Genet, and Anthropol., Velazquez 144, MADRID 6, Spain

a Clonal analysis of wing imaginal disc development in situ and in culture; effect of genetic recombination of mutations on further clonal development. *Drosophila melanogaster (Diptera)*

b Nature of the specificity of cell recognition in cell aggregates of imaginal discs; cell affinities of normal versus mutant genotypes. *Drosophila melanogaster (Diptera)*

GARDENGHI, G. Dr. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy

a i n v i t r o culturing of larval gonads. *Bufo bufo (Anura)*

b Hormonic regulation of ovarian and Bidder's organ oogenesis. *Bufo bufo (Anura)*

GARGOUÏL, Y. M. Dr.ès Sci., Prof. — Lab. de Physiol. anim., Fac. des Sci., Univ. de Poitiers, 40 Av. de Recteur Pineau, 86 POITIERS, France

a Electrophysiology of embryonic heart and muscles; study of the development of membrane properties. *Ambystoma tigrinum (Urodela), Cavia porcellus, Rattus norvegicus (Rodentia)*

b Histology and electron microscopy of the embryonic heart. *Rattus norvegicus (Rodentia)*

GARROD, D. R. B.A. — Dept. of Biol. as applied to Med., The Middlesex Hosp. Med. School, LONDON W.1, England

a Morphogenetic movement and cell adhesion. *Dictyostelium discoideum (Acrasiales)*

GARWEG, G. Dr.med. — Anat. Inst. der Univ., für Neuroanat., Nussallee 10, 53 BONN, W.Germany

a Ontogenesis of the brain. *Mus musculus (Rodentia)*

GASC, J. M. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France

a X-ray damages on embryonic intestine at biochemical level. *Gallus domesticus (Aves)*

b Evolution of the DNA-like RNA during embryonic development. *Xenopus laevis (Anura)*

GASSER, F. Dr.Biol. — Lab. de Biol., Génér., Fac. des Sci., 118 Route de Narbonne, 31 TOULOUSE (04), France

a Différenciation de diverses catégories de protéines au cours du développement; étude cytochimique et électrophorétique. *(Urodela)*

GASSER, R. F. Ph.D. — Dept. of Anat., Louisiana State Univ., 1542 Tulane Ave., NEW ORLEANS, La. 70112, U.S.A.

a The development of the trigeminal nerve. *Papio* spp. *(Primates)*

b The development of the parotid gland around the facial nerve. *Homo sapiens (Primates)*

c A sectional atlas of embryonic stages. *Homo sapiens (Primates)*

GATES, A. H. Ph.D. — Dept. of Gynecol. and Obstet., School of Med., Stanford Univ., PALO ALTO, Calif. 94304, U.S.A.

GAUTHIER, Miss G. F. Dr. — Lab. of Cell. Biol., Dept. of Biol. Sci., Wellesley Coll., WELLESLEY, Mass. 02181, U.S.A.

a Postnatal differentiation on three fiber types in skeletal muscle (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss H. A. PADYKULA and Miss J. M. TAYLOR)

b Differentiation of neuromuscular junctions in skeletal muscle (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss H. A. PADYKULA and Miss J. M. TAYLOR)

c Ovarian-uterine-placental relationship (electron microscopy and histochemistry). *Didelphys virginiana (Marsupialia)* (in collaboration with Miss H. A. PADYKULA and Miss J. M. TAYLOR)

d Lipid transport by the yolk sac placenta (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss H. A. PADYKULA and Miss J. M. TAYLOR)

GAY, Miss H. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

a Molecular structure of chromosomes during genetic activity, with special reference to nucleic acids and proteins of heterochromatin and euchromatin (studied by electron microscopy, cytochemistry, autoradiography and biochemistry). *Haplopappus gracilis (Compositae), Vicia faba (Leguminosae), Drosophila melanogaster (Diptera)*

GAYER, J. Dr. — Dept. of Biol., Med. Fac., Charles Univ., Šimkova 870, HRADEC KRÁLOVÉ, Czechoslovakia

a Myogenesis (fusions, multinuclearity) in vitro studied by phase-contrast microscopy and time-lapse cinematography. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

b Myogenesis in vitro studied with RNA autoradiography. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

c Nucleolus during myogenesis in vitro studied by phase-contrast time-lapse cinematography. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)* (in collaboration with V. PŮŽA and M. HROCH)

GAYET, J. F. D.Sc., Prof. — Lab. de Physiol. Génér., Fac. des Sci., 15 Place Carnot, 54 NANCY, France
(no embryological work in progress)

GAZE, R. M. Ph.D. — Physiol. Dept., Med. School, Univ. of Edinburgh, Teviot Place, EDINBURGH 8, Scotland, U.K.

a Functional aspects of regeneration of the optic nerve. *Xenopus laevis, Rana temporaria (Anura)*

b Cellular changes in tectum and eye after optic nerve section. *Triturus cristatus (Urodela)*

c Functional results of tectal grafting. *Carassius auratus (Teleostei)*

d Development of visual connections in embryos. *Xenopus laevis (Anura)*

GEBHARDT, D. O. E. Ph.D. — Dept. of Pharmacol., Rijks Inst. voor de Volksgezondheid, Sterrenbos 1, UTRECHT, Netherlands

a The action of drugs on embryonic development. *Gallus gallus (Aves), Mus musculus (Rodentia)*

b The action of drugs on limb regeneration. *Ambystoma mexicanum (Urodela)*

c The embryotoxicity of anti-kidney serum and its localization by immunofluorescence. *Mus musculus (Rodentia)*

GEDALIA, I. PhD. — Lab. of Oral Chem. and Fluoride Research, Fac. of Dental Med., The Hebrew Univ., Hadassah Med. School, P.O.B. 1172, JERUSALEM, Israel
(no embryological work in progress)

GEHRING, W. J. Ph.D., Prof. — Dept. of Anat. Yale Univ., NEW HAVEN, Conn. 06510, U.S.A.

a Developmental biology of imaginal discs. *Drosophila* spp. *(Diptera)*

b Cell heredity in cultures of imaginal discs. *Drosophila melanogaster (Diptera)*

c Biochemical studies on differentiation in disc cells. *Drosophila melanogaster (Diptera)*

d Studies on mutants interfering with disc development. *Drosophila melanogaster (Diptera)*

GEIGY, R. Dr., Prof. — Schweiz. Tropeninst., Socinstr. 57, 4051 BASEL, Switzerland — Zool. Anstalt der Univ., Rheinsprung 9, 4000 BASEL, Switzerland

a Spermatogenese, Ovogenese, Embryonalentwicklung und Endocrinologie. *(Ixodoidea, Acarina, Arachnoidea)* (in collaboration with A. AESCHLIMANN)

b Übertragung von Spirochaetosen über das mütterliche Ovarium auf die Embryonen und damit auf die Nachkommen der nächsten Generation. *(Argasidae, Acarina, Arachnoidea)* (in collaboration with A. AESCHLIMANN)

GEILENKIRCHEN, W L. M. Ph.D. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a Metabolism and respiration of egg and embryo. *Limnaea stagnalis (Gastropoda)*

b Influence of various kations on development. *Limnaea stagnalis (Gastropoda)*

c Analysis of mechanisms of cytodifferentiation in cleaving eggs. *Limnaea stagnalis (Gastropoda)*
d Germinal localization in eggs. *Dentalium* spec. *(Scaphopoda); Patella* spec. *(Gastropoda)*

GÉNIS-GÁLVEZ, J. M. Med.Dr., Ph.D., Prof. — Dept. de Anat., Fac. de Med., Univ. de Granada, GRANADA, Spain

GEORGE, J. C. Ph.D., Prof. — Dept. of Zool., Univ. of Guelph, GUELPH, Ont., Canada

GEORGES, Miss D. Dr.spéc. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Development of the gonads: role of the neural complex and other factors in spermatogenesis and oogenesis. *Ciona intestinalis (Ascidiae)*
b Development and cyclic changes in the neural gland; morphological, physiological and ultrastructural study. *Ciona intestinalis (Ascidiae)*

GEORGIEV, G. P. Dr. — Inst. of Molec. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 32, MOSCOW V-312, U.S.S.R.

GÉRARD, H. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France

GÉRARD, Miss M. J. Lic. et D.E.A. — Lab. de Biol. Gén., Fac. des Sci., B.P. 347, 51 REIMS, France

GERLINGER, P. Dr.en Méd. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
a Etude de la formation des constituants de l'oeuf

GERISCH, G. Dr.rer.nat. — Biol. Inst. I (Zool.) der Univ., Katharinenstr. 20, 78 FREIBURG, W.Germany
a Chemotaxis, Induktionswirkung von Aggregationszentren. *Dictyostelium minutum (Acrasiales)*
b Zellkontaktbildung, Zelldifferenzierung, Entwicklungsdefekte bei Mutanten. *Dictyostelium discoideum (Acrasiales)*

GERKEN, Miss S. E. B.Sc. — Dept. de Zool., Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4° andar, C.P. 253, BELO HORIZONTE, M.G., Brazil

GERNEKE, W. H. D.Sc. — Dept. of Anat., Fac. of Vet Sci., Univ. of Pretoria, P.O. ONDERSTEPOORT, South Africa

GERZELI, G. Prof. — Ist. di Anat. Comp., Univ. di Pavia, Piazza Botta 10, 27100 PAVIA, Italy
a Electron microscopical studies on the oocytes containing polyphenolic substances. *Thysanozoon brocchii (Polycladidea, Turbellaria)*
b Egg-shell formation and vitellin cells (histochemical, histomorphological and biochemical). *(Plathelminthes)*
c Allantois and urinary bladder (histochemical and histomorphological). *(Chelonia)*

GEUSKENS, M. D.Sc.Zool. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium
a Etude par microscopie électronique et autoradiographie à haute résolution, de l'influence des constituants cytoplasmiques sur la transcription des gènes au cours du développement embryonnaire. *Xenopus laevis (Anura), Pleurodeles waltlii (Urodela), Ilyanassa obsoleta (Gastropoda)*

GEYER (DUSZYŃSKA), Mrs. I. Dr. — Dept. of Anat., Cornell Univ., 1300 York Ave., NEW YORK, N.Y. 10021, U.S.A.

GEZELIUS, N. G. B. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Studies with labelled precursors of the correlations between protein synthesis and morphological development and of the interactions between nucleus and cytoplasm. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*

GHIRARDELLI, E. Prof. — Ist. di Zool. e Anat. Comp., Univ. di Trieste, Via Alfonso Valerio, 32 TRIESTE, Italy
a Germ cell differentiation. *(Planariidae, Turbellaria)*
b Germ cell differentiation. (Bidder's organ differentiation). *Bufo bufo (Anura)*
c Germ cell determinant. *Spadella cephaloptera (Chaetognatha)*

GIANNETTI, A. M.D. — Dept. of Dermatol., School of Med., Univ. of Pavia, Policlinico S. Matteo, 27100 PAVIA, Italy
a Mucoproteins in fetal skin. *Homo sapiens (Primates)*
b Developmental changes of glycosaminoglycan content in fetal epidermis. *Homo sapiens (Primates)*

GIBLEY, C. W., Jr. Ph.D. — Pennsylvania Coll. of Podiat. Med., 804 Pine St., PHILADELPHIA, Pa. 19107, U.S.A.
a Histochemistry and fine structure of the developing excretory system. *Rana pipiens (Anura), Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Histochemistry and electron microscopy of differentiating experimentally induced renal carcinomas. *Mesocricetus auratus (Rodentia)*

GIBSON, I. Ph.D. — School of Biol. Sci., Univ. of East Anglia, Wilberforce Rd., NORWICH, NOR 88C, England

a Nuclear-cytoplasmic interaction in single cells. *Paramecium aurelia (Ciliata)*
b Techniques of nucleic acid hybridization as applied to developing systems. *Echinus esculentus, Asterias vulgaris (Echinodermata), Xenopus laevis (Anura), Gallus domesticus (Aves)*

GIDHOLM, L. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Larval development. *(Syllidae, Polychaeta)*

GIHR, Miss M. Dr.phil. — Hirnanat. Inst. der Psychiatr. Univ. Klinik Bern, 3072 OSTERMUNDIGEN-BE, Switzerland
a Ontogenesis of the brain. *(Cetacea)*

GILBERT, P. W. Ph.D., Prof. — Div. of Biol. Sci., Cornell Univ., ITHACA, N.Y. 14850, U.S.A. •

GILBERTSON, D. E. Ph.D. — Dept. of Zool., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
a Metabolism of nucleic acids and proteins in larvae. *Schistosoma mansoni (Trematoda)*

GILES, E. T. Ph.D., D.I.C. — Dept. of Zool., Fac. of Sci., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia
a Postembryonic development of reproductive organs and genitalia. *Labidura riparia truncata (Dermaptera)*

GILLOT (PERDRIX), Mrs. S. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Etude autoradiographique du métabolisme des acides nucléiques dans les noyaux endopolyploides. *Drosophila melanogaster (Diptera), Bombyx mori, Galleria mellonella (Lepidoptera)*

GINSBURG, Mrs. A. S. Dr.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Cytological, electron microscopical and experimental investigations of the fertilization process. *Ostrea gigas (Lamellibranchia), Acipenser guldenstädti, A. stellatus (Chondrostei), Lebistes reticulatus (Teleostei)*

GINSBURGER-VOGEL, T. Agr. — Lab de Génét. Evol. et de Biométrie, C.N.R.S., 91 GIF-sur-YVETTE, France
a Recherche sur la détermination génétique du sexe et de l'intersexualité. *Orchestia gammarellus (Amphipoda, Crustacea)*

GINZBURG, G. I. Cand.biol.sci. — Lab. of Biochem., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

GIOVANNINI, E. Dott. — Ist. di Biol. Gener., Fac. di Med., Via del Giochetto, 06100 PERUGIA, Italy
a Ruolo del rene e della milza nel controllo dell'eritropoiesi. *Oryctolagus cuniculus (Rodentia)*

GIPOULOUX, J.-D. Dr.ès Sci. — Lab. de Biol. Anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, 33 TALENCE, France
a Etude expérimentale de la morphogenèse de l'appareil génital. *(Anura)*
b Evolution des cellules germinales. *(Anura)*
c Etude de l'ultrastructure embryonnaire. *(Anura)*

GIRARD (DECHAMBE), Mrs. C. Dr.en Biol.anim. — Lab. de Biol. Anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, 33 TALENCE, France
a Modalités et facteurs de formation de l'ostium et de l'oviducte. *(Anura)*
b Modalités de la métamorphose de l'appareil excréteur. *Rana dalmatina, Bufo bufo (Anura)*

GIRARD, H. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
a Physiologie cardio-vasculaire de l'embryon: action de substances vaso-actives (substances adrénergiques en particulier) et de gaz respiratoires. *Gallus gallus (Aves), Rattus norvegicus, Cavia cobaya (Rodentia)*

GIROUD, A. Prof. — Lab. d'Histol.-Embryol. B. Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France •
a Recherches sur l'influence tératogène des infections Rickettsiennes. *Mus rattus, Mus musculus (Rodentia)*
b Mécanismes des abnormalités diverses, spécialement du système nerveux. *Mus rattus, M. musculus (Rodentia)*

GITLIN, G. Ph.D., Prof. — Dept. of Anat., The Hebrew Univ. — Hadassah Med. School. P.O. Box 1172, JERUSALEM, Israel
a Effect of ovariectomy in the newborn on vaginal opening. *Mus norvegicus (Rodentia)*
b Relation of epiglottis to soft palate in the fetus and newborn. *Homo sapiens (Primates)*

GIUDICE, G. M.D., Prof. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italia •
a Protein synthesis during early development. *Paracentrotus lividus (Echinoidea)*
b Aggregation of cells isolated from embryos. *Paracentrotus lividus (Echinoidea)*
c RNA synthesis during early development. *Paracentrotus lividus (Echinoidea)*

GIUNTA, C. Dr. — Inst. of Biochem., Univ. of Turin, Via Giolitti 34, 10123 TORINO, Italy

a Induction by prolactin of thyroid activation in larvae at advanced metamorphic stages. *Bufo bufo (Anura)* (in collaboration with M. T. RINAUDO, R. BRUNO, Miss A. GUARDABASSI, M. OLIVERO and E. CAMPANTICO)

GLADE, R. W. Ph.D., Prof. — Dept. of Zool., Marsh Life Sciences Building, Univ. of Vermont, BURLINGTON, Vt. 05401, U.S.A.

a Establishment of bilateral symmetry in eggs as influenced by temperature gradients; histological study of normal symmetrization. *Rana pipiens, Xenopus laevis (Anura)*

b Influence of heterotopic tissues on limb regeneration investigated by the transplantation of tail skin, epidermis, and connective tissue to the limb stump. *Siredon mexicanum (Urodela)*

GLAS, P. M.Sc. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands

GLASS, Miss L. E. Ph.D. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.

a Studies on maternal macromolecules transferred to developing ovarian oocytes and oviductal or uterine embryos; interrelationships with macromolecules synthesized by the oocyte or embryo itself. *Mus musculus (Rodentia)*

GLASSER, S. R. Ph.D., Prof. — Dept. of Obstet. and Gynecol., School of Med., Vanderbilt Univ., NASHVILLE, Tenn. 37203, U.S.A.

GLENISTER, T. W. D.Sc., Ph.D., Prof. — Dept. of Anat., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C.2, England

a Reaction of genital tract tissues to hormones in vitro. *(Mammalia)*

b Study of blastocyst implantation in vitro. *(Mammalia)*

c Behaviour of trophoblast in vitro. *(Mammalia)*

d Development of embryos in vitro. *(Mammalia)*

e Ultrastructure of embryo-maternal relationships during implantation. *(Mammalia)*

GLOOR, H. J. Ph.D., Prof. — Genet. Lab., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands

a Differentiation in imaginal discs. *Drosophila melanogaster (Diptera)*

GODET (NONNENMACHER), Mrs. J. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a La différenciation cellulaire dans le tissu sanguin et les diverses formes d'hémoglobine. *Gallus domesticus (Aves)*

GODINA, G. Prof. — Ist. di Anat. degli Anim. Domestici, Univ. di Torino, Via Nizza 52, 10126 TORINO, Italy

a Origin of binucleate cells in cultures. *(Aves)*

b Effect of subnormal temperatures on mitosis of cells cultured in vitro. *(Aves)*

c Mitoses of binucleate cells. *(Aves)*

GOEDBLOED, J. F. M.D. — Anat.-Embryol. Lab., Fac of Med., State Univ. of Leiden, Wassenaarseweg 62, LEIDEN, Netherlands

a Differentiation and general growth. *Rattus norvegicus, Mus musculus (Rodentia)*

b Development of branchial regions and otic organs. *Rattus norvegicus, Mus musculus (Rodentia)*

GOERINGER, G. C. Ph.D. — Dept. of Anat., Georgetown Univ., 3900 Reservoir Rd., WASHINGTON, D.C. 20007, U.S.A.

GOETINCK, P. F. Ph.D. — Dept. of Anim. Genet., Storrs Agric. Exper. Station. Univ. of Connecticut, STORRS, Conn. 06268, U.S.A.

a Mesoderm-ectoderm interaction in differentiation (limb, scales and feathers). *Gallus domesticus (Aves)*

GOFF, R. A. Ph.D., Prof. — Dept. of Zool., Univ. of Oklahoma, 730 South Oval, Rm 222, NORMAN, Okla. 73069, U.S.A.

a Analysis of the development of the appendicular skeleton by means of X-rays. *Gallus domesticus (Aves)*

b Histochemical analysis of morphogenesis. *(Vertebrata)*

GOLDBERG, E. Ph.D. — Dept. of Biol. Sci., Northwestern Univ., EVANSTON, Ill. 60201, U.S.A.

GOLDHOR, Miss S. Ph.D. — Biol. Inst., Hacettepe Univ., ANKARA, Turkey

a Biochemical investigation of membrane structural protein in different membranes at different stages of development in normal and cancerous tissues. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

b Developmental changes in membrane lipids. *Gallus domesticus (Aves)*

GOLDIE, M. Ph.D. — Dept. of Biol., Loyola Univ., 6525 North Sheridan Rd., CHICAGO, Ill. 60626, U.S.A.

a Morphogenesis of the tail. *Gallus domesticus (Aves)*

b Histological analysis of the development of the rumpless phenocopy. *Gallus domesticus (Aves)*

c Site of action of factors inducing the rumpless phenocopy. *Gallus domesticus (Aves)*

d Effects of excess nutrients on early development in ovo and in vitro. *Gallus domesticus (Aves)*

GOLDSMITH, Miss M. Ph.D. — Dept. of Biol., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.

a The role of cytolysosomes in cell death and the hormonal control of cellular events during metamorphosis using electron microscopy, histo- and cytochemical techniques. *Rhodnius prolixus (Hemiptera), Rana pipiens (Anura)*

b Epidermal-mesodermal relationships during cell death and cell differentiation in the integument during larval stages and metamorphic climax is being studied at the level of cellular ultrastructural changes, both in vivo and in vitro. *Rana pipiens (Anura)*

GOLDSTEIN, L. Ph.D., Prof. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A.

GOLDWASSER, E. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Biochemistry of induced differentiation of red blood cells

GOLICHENKOV, V. A. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

GOMEZ DUMM, C. L. M.D. — Cat. "B" de Embriol., Biol. e Histol., Fac. de Cienc. Med., Univ. Nac. de La Plata, 60 y 120, LA PLATA, Argentina

GOMOT, L. Dr.ès Sci., Prof. — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France

a Développement embryonnaire de la glande uropygienne. *(Aves)* (en collaboration avec Mlle. J. BRIDE)

b Différenciation sexuelle des hybrides. *(Aves)*

c Organogenèse de la glande mammaire. *Oryctolagus cuniculus (Lagomorpha)* (en collaboration avec A. PROPPER)

d Recherches sur la différenciation de la glande hermaphrodite. *Helix aspersa (Pulmonata, Gastropoda)* (en collaboration avec A. GÜYARD)

e Recherches sur le développement in vivo et in vitro du coeur. *Rana temporaria, Xenopus laevis (Anura)* (en collaboration avec Mrs. M. BRIDE-VUILLET)

f Evolution histophysiologique de l'appareil reproducteur au cours de l'ontogenèse chez des hybrides stériles. *Cairina moschata* x *Anas platyrhynchos (Aves)* (en collaboration avec C. R. MARCHAND)

g Déterminisme de la sexualité. *Paludina vivipara (Prosobranchia, Gastropoda)* (en collaboration avec Mrs. B. GRIFFOND-ROGNON)

GÖNENÇ, Miss A. — Inst. of Histol. and Embryol., Med. Fac., Hacettepe Sci. Center, ANKARA, Turkey

a Ultrastructural differentiation of somitic mesoderm. *Gallus domesticus (Aves)*

GONTCHAROFF, Miss M. Prof. — Lab. de Biol. Cell., Fac. des Sci., B.P. 347, 51-REIMS, France

a Regeneration. *Lineus ruber (Anopla, Nemertea)*

b Analogues of DNA in embryonic development. *Strongylocentrotus purpuratus (Echinoidea)*

GONZALEZ-SANTANDER, R. D.Med. — Inst. Cajal, Velazquez 144, MADRID 6, Spain

a Citodiferenciacion de los gonocitos.

b Ultraestructura de la cresta neural. *Gallus domesticus (Aves)*

c Ultraestructura de los ovocitos. *Homo sapiens (Primates)*

GOODWIN, B. C. Ph.D. — School of Biol. Sci., Univ. of Sussex, Falmer, BRIGHTON, Sussex, England

a Control of regeneration by local electrical and biochemical stimulation. *Hydra littoralis (Coelenterata)*

GORDON, H. P. Ph.D. — Dept. of Oral Biol., School of Dent., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

a Ontogeny of myocardium; developmental phenomena associated with myocardial cell interactions in vitro. *Gallus domesticus (Aves)*

b Onset of protein synthesis and its control in parotid gland: epithelial-mesenchymal interaction leading to biochemical differentiation and exogenous agents affecting control of secretory events in vitro including synthesis, storage and expulsion of proteins. *Rattus rattus (Rodentia)*

GORHAM, L. W. M.D. — Dept. of Pathol., Cornell Univ., 1300 York Ave., NEW YORK, N.Y. 10021, U.S.A.

GOSS, R. J. Ph.D., Prof. — Div. of Biol. & Med. Sci., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.

a Compensatory renal hypertrophy. *Rattus rattus (Rodentia)*

b Growth regulation. *(Teleostei)*

GÖSSWALD, K. Dr.phil., Prof. — Inst. für Angew. Zool., Univ. Würzburg, Röntgenring 10, 87 WÜRZBURG, W.Germany

a Development. *(Formicinae,* esp. *Formica rufa* group, *Hymenoptera)*

GOSWAMI, M. N. D. Ph.D. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint-Bernard, 75 PARIS 5e, France

a Enzyme development in growth and metamorphosis; the enzymes in the degradation of tyrosine. *(Pisces), Rana pipiens, Discoglossus pictus, Mantidactylus grandidieri, Rhacophorus goudoti, Ptychadena mascarienensis, Nectophrynoides orientalis, Bufo marinus, Xenopus laevis (Anura), (Mammalia)*

b Developmental biology of enzymes; probable factors at the molecular level which determine the regulation and development of three tyrosine-oxidizing enzymes (tyrosine aketoglutarate aminotransferase, p-hydroxyphenylpyruvate hydroxylase and homogentisate oxygenase) in the liver. *(Vertebrata)*

GÖTTING, K. J. Dr.rer.nat. — I. Zool. Inst., Naturw. Fak., Justus Liebig-Univ., Stephanstr. 24, D-63 GIESSEN, W.Germany

a Electron microscopical investigations on oogenesis of marine forms. *(Teleostei)*

GOTTLIEB, F. J. Ph.D., Prof. — Dept. of Biol., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.

a The development and differentiation of the wing imaginal disc. *Drosophila melanogaster (Diptera), Ephestia kühniella (Lepidoptera)*

b The genetic control and development of pigmentation in the eye and testis. *Ephestia kühniella (Lepidoptera)*

GOTTLIEB, G. Ph.D. — Psychol. Lab., Dorothea Dix Hospital, RALEIGH, N.C. 27602, U.S.A.

a Behavioral development of foetuses and embryos. *Anas platyrhynchos, Gallus gallus (Aves)*

GOTTSCHEWSKI, G. H. M.Dr.phil.habil., Prof. — Max-Planck-Inst. für Immunbiol., Stefan-Meier-Str. 8, 78 FREIBURG i. Br., W.Germany

a Teratogenic influence of maternal metabolic status on the embryo. *Oryctolagus cuniculus (Lagomorpha), Mus musculus (Rodentia)*

b Determination and differentiation of the organ anlagen. *Oryctolagus cuniculus (Lagomorpha), Mus musculus (Rodentia)*

GOUIN, F. J. Dr.ès Sci. — Musée Zool. de l'Univ. et de la Ville, 29 Bd. de la Victoire, F-67 STRASBOURG, France

a Descriptive and comparative embryology and postembryonic morphogenesis. *(Myriapoda; Insecta)*

b Review of all work in descriptive, comparative and/or experimental embryology and postembryonic morphogenesis. *(Myriapoda; Onychophora; Insecta)*

GOULD (SOMERO), Mrs. M. Ph.D. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C. Canada

a Patterns of protein synthesis during oogenesis. *Urechis caupo (Echiuroidea)*

b Patterns of protein synthesis during early development. *Urechis caupo (Echiuroidea), Ilyanassa obsoleta (Gastropoda)*

GOURDOUX (DESTRADE), Mrs. L. — Lab. de Physiol. Génér., Fac. des Sci. de Bordeaux, Avenue des Facultés, 33 TALENCE, France

a Métabolisme du développement. *Tenebrio molitor (Coleoptera), Carausius morosus (Phasmidoptera)*

GRABOWSKI, C. T. Ph.D., Prof. — Dept. of Biol., Univ. of Miami, CORAL GABLES, Fla. 33124, U.S.A.

a Teratological effects of hypoxia. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

b Morphogenetic and biochemical analysis of effects of hypoxia on the embryo. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

c Physiology of fluid and electrolyte balance in the early embryo and its relation to teratogenesis. *Gallus domesticus (Aves), Rattus norvegicus, Oryctolagus cuniculus (Mammalia)*

d Blood chemistry of the young embryo. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

e Time-lapse studies of embryos exposed to teratogenic agents. *Gallus domesticus (Aves)*

GRAHAM, D. E. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Studies on functions of satelite DNA's and macromolecular metabolism in regenerating tissues. *Gecarcinus lateralis (Decapoda, Crustacea)* (in collaboration with Miss M. S. KERR and D. M. SKINNER)

GRAHN, I. — Zoophysiol. Inst., Univ. of Lund, Helgonavägen 3, 223 62 LUND, Sweden

a Biochemically induced irregularities in karyokinesis and cytokinesis during early cleavage. *Planorbis* spec. *(Gastropoda)*

GRANT, Ph. Ph.D. — Dept. of Biol., Univ. of Oregon, EUGENE, Ore. 97403, U.S.A. •

GRASSO, J. A. Ph.D. — Dept. of Anat., School of Med., Case Western Reserve Univ., 2109 Adelbert Rd., CLEVELAND, Ohio 44106, U.S.A.

a Morphological and chemical studies of red blood cell development. *Triturus viridescens, T. cristatus carnifex, Taricha torosa (Urodela)*

GRASSO, M. Dr., Prof. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy

a Role of neurosecretion in the regeneration and in the differentiation and ripening of the genital apparatus. *Dugesia lugubris, Polycelis nigra (Turbellaria), Fasciola hepatica (Trematoda)*
b Descriptive and experimental study of development and sex differentiation of genital apparatus. *Sepia officinalis (Cephalopoda)*

GRAU, C. R. Ph.D., Prof. — Dept. of Poultry Husbandry, Univ. of California, DAVIS, Calif. 95616, U.S.A.

GRAY, D. J. Ph.D. — Dept. of Anat., School of Med., Stanford Univ., STANFORD, Calif. 94305, U.S.A.
a Prenatal development of bone. *Homo sapiens (Primates)*

GRAY, Miss F. H. Ph.D. — Dept. of Physiol., Univ. of Miami, P.O. Box 875, Biscayne Annex, MIAMI, Fla. 33152, U.S.A.
a Hormonal control of metachemogenesis; post-emergence maturation of insects. *Apis mellifera (Hymenoptera), Musca domestica (Diptera)*

GREEN, Ch. R. Ph.D. — Dept. of Pathol., Univ. of Melbourne, PARKVILLE, Vict. 3052, Australia
(no embryological work in progress)

GREEN, Mrs. M. C. Ph.D. — The Jackson Lab., BAR HARBOR, Me. 04609, U.S.A.
a Developmental genetics. *Mus musculus (Rodentia)*

GREENFIELD, Miss M. L. B.Sc. — Dept. of Zool., Univ. of Dar-Es-Salaam, DAR-ES-SALAAM, Tanzania

GREENGARD, O. Ph.D. — Dept. of Biol. Chem., Canc. Research Inst., New England Deaconess Hosp., 185 Pilgrim Rd., BOSTON, Mass. 02215, U.S.A.
a Prenatal and early postnatal development of specific enzymes. *Rattus norvegicus (Rodentia)*

GREENWOOD, M. S. M.Sc., M.F.S. — Dept. of Biol., Middlebury Coll., MIDDLEBURY, Vermont, U.S.A.
a Studies on the origin and physiology of roots regenerated by hypocotyl slices from dormant, mature embryos. *Pinus lambertiana (Gymnospermae)*

GREGG, J. H. Ph.D., Prof. — Dept. of Zool., Univ. of Florida, GAINESVILLE, Fla. 32601, U.S.A.
a Developmental physiology. *(Acrasiales)*

GREGG, J. R. Ph.D., Prof. — Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A. •
a Metabolism of normal animals and hybrids. *Rana pipiens, R. pipiens* ♀ x *R. sylvatica* ♂ *(Anura)*
b Metabolism of normal and hybrid tissue-breis. *Rana pipiens, R. pipiens* ♀ x *R. sylvatica* ♂ *(Anura)*

GRELL, K. G. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Hölderlinstr. 12, 74 TÜBINGEN, W.Germany

GREMIGNI, V. Dr.Biol.Sci. — Ist. di Zool. e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy
a Cytochemistry and electron microscopy of oogenesis. *(Tricladidea, Turbellaria)*

GRIFFOND (ROGNON), Mrs. B. Lic.ès Sci. — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France
a Déterminisme de la sexualité. *Paludina vivipara (Prosobranchia, Gastropoda)* (en collaboration avec L. GOMOT)

GRILLO, H. C. M.D., Prof. — Dept. of Surgery, Massachusetts Gen. Hosp., BOSTON, Mass. 02114, U.S.A.
a Biological characteristics and function of native tissue collagenases in wounds; partial purification and characterization. *(Mammalia)*

GRILLO, T. A. I. Prof. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria •

GROBSTEIN, C. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A. •
a Epithelio-mesenchymal relationships in pancreatic differentiation
b The nature and behavior of interface materials in inductive systems

GRODZIŃSKI, Z. D.Sc., Prof. (Emer.) — Dept. of Comp. Anat., Jagellonian Univ., ul. Krupnicza 50, KRAKÓW, Poland •
a Studies on yolk from the ripe egg; influence of hypo- and hypertonic NaCl solutions; supravital basic and acidic dyes; electron microscopy; structure of yolk platelets. *Myxine* spec. *(Agnatha), Amia* spec., *Lepisosteus* spec. *(Holostei)*

GROENENDIJK (HUYBERS), Mrs. M. M. M.D., D.Sc. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands

GROS, D. M.ès Physiol. — Lab. de Physiol. Anim., Fac. des Sci., Univ. de Poitiers, 40 Av. de Recteur Pineau, 86 POITIERS, France
a Electrophysiological study of embryonic heart in relation with electron microscopy. *Rattus norvegicus (Rodentia)*

GROSCH, D. S. Ph.D. — Dept. of Genet., North Carolina State Univ., 353 Gardner Hall, RALEIGH, N.C. 27607, U.S.A.

a Egg production and survival of embryos after mother has been fed enzyme inhibitors, antimetabolites and related compounds; without and with irradiation. *Habrobracon* spec. *(Hymenoptera)*
b The effects of space flight on reproductive performance (weightlessness, dynamic factors of launching and recovery, and radiation effects). *(Insecta)*

GROSS, P. R. — Dept. of Biol., Massachusetts Inst. of Technol., CAMBRIDGE, Mass. 02139, U.S.A.

GROTE, W. Dr.med. — Inst. for Human Genet. and Anthropol., Univ. of Düsseldorf, Ulenbergstr. 127, 4000 DÜSSELDORF, W.Germany
a Teratogenesis by increase of partial CO_2 and O_2 pressure or by reduction of the atmospheric pressure. *Oryctolagus cuniculus (Lagomorpha)*
b Teratogenic effect of hypothermia: electrolytes in serum, and lactic and pyruvic acid in blood under normothermic and hypothermic conditions. *Oryctolagus cuniculus (Lagomorpha)*
c Teratogenic effect of maternal hemorrhages. *Oryctolagus cuniculus (Lagomorpha)*

GRUMMT, F. Dipl.biol. — Inst. für Zellphysiol., Deutsche Akad. der Wissensch. zu Berlin, Lindenberger Weg 70, 1115 BERLIN-Buch, East.Germany

GRÜNEBERG, H. Ph.D., M.D., D.Sc., F.R.S., Prof. — Dept. of Anim. Genet., Univ. Coll. London, Wolfson House, 4 Stephenson Way, LONDON N.W.1, England •
a Developmental genetics. *Mus musculus (Rodentia)*

GRUNZ, H. Dr.rer.nat. — Inst. für Physiol. Chemie, Freie Univ. Berlin, Arnimallee 22, 1 BERLIN 33, W.Germany
a RNA- and protein synthesis with regard to aggregation of dissociated embryonic cells. *(Amphibia), Gallus domesticus (Aves)*
b Changes of cell affinity during morphogenesis. *(Vertebrata)*
c Competence in early development. *Triturus alpestris, Ambystoma mexicana (Urodela)*

GSELL, R. — Zool.-vergl. Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, 8006-ZÜRICH, Switzerland
a Clonal analysis in cultures of imaginal discs from instable mottling systems (strain Y^{sc8}). *Drosophila melanogaster (Diptera)*

GUARDABASSI, Miss A. Dr.nat.sci., Prof. — Inst. of Exper. Embryol., Univ. of Turin, Via Giolitti 34, 10123 TORINO, Italy
a Induction by prolactin of thyroid activation in larvae at advanced metamorphic stages. *Bufo bufo (Anura)* (in collaboration with M. OLIVERO, E. CAMPANTICO, M. T. RINAUDO, C. GIUNTA and R. BRUNO)

GUERRIER, P. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Etude microcinématographique du développement. *(Nematoda; Spiralia)*

GUICHARD (CHAVENAT) Mrs. A. Maître ès sci.biol.anim. — Lab. de Chimie Hormonale, Maternité de Port-Royal, 121 Bd. de Port-Royal, PARIS XIVe, France
a Biosynthesis of steriods and sterols in organotypic culture of immature gonads; influence of HCG on steroidogenesis. *Gallus domesticus (Aves)*
b Cholesterol synthesis from acetate-14C and utilization of endogenous cholesterol for progesteron synthesis in placenta perfused in vitro; influence of chorionic gonadotropin and LH. *Homo sapiens (Primates)*

GUIRAO-PEREZ, M. Med.Dr., Prof. — Inst. F. Olóriz, Fac. of Med., Univ. of Granada, GRANADA, Spain

GUMBRECK, L. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Oklahoma, 801 NE 13th St., OKLAHOMA-City, Okla. 73104, U.S.A.
a Studies on the development of genital, ophthalmic and urinary anomalies as related to genes, with emphasis on hermaphroditic alterations. *Rattus rattus (Rodentia)*

GUNBERG, D. L. Ph.D., Prof. — Anat. Dept., Univ. of Oregon Med. School, 3181 S.W. Sam Jackson Park Rd., PORTLAND, Ore. 97201, U.S.A.
a In vitro investigations of the metabolic requirements of early post-implantation embryos. *Rattus norvegicus (Rodentia)*
b An investigation of the effects of teratogens on 6-30 somite embryos cultured in serum. *Rattus norvegicus (Rodentia)*

GUNDISCH, M. M.D., D.Sc., Prof. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str. Gh. Marinescu 38, TÎRGU-MUREŞ, Rumania

GUPTA, P. C. Ph.D. — Dept. of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India
a Developmental morphology. *Bemisia gossypiperda (Aleurodidae, Homoptera)*
b Studies on structural differences in development in relation to the host plant. *Bemisia gossypiperda (Aleurodidae, Homoptera)*

GURAYA, S. S. Ph.D. — Dept. of Zool., Univ. of Udaipur, UDAIPUR, Rajasthan, India

GURDON, J. B. M.A., D.Phil. — Dept. of Zool., Parks Rd., OXFORD, England •

GUSTAFSON, T. Fil.Dr., Prof. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden •
a Morphogenetic movements and cell contacts. *(Echinoidea)*
b Enzyme induction and repression in cell cultures

GUTIERREZ, M. Dr. — Dept. de Anat., Cat. de Anat. II, Fac. de Med., CADIZ, Spain
GUYARD, A. Lic.ès Sci. — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France
a Recherches sur la différenciation de la glande hermaphrodite. *Helix aspersa (Pulmonata, Gastropoda)* (en collaboration avec L. GOMOT)
GWATKIN, R. B. L. Ph.D. — Physiol. Dept., Merck Inst. for Therap. Research, RAHWAY, N.J. 07065, U.S.A.
a Studies on fertilization, implantation and early development. *(Mammalia)*
GYERGYAY, F. M.D. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str. Gh. Marinescu 38, TÎRGU-MUREŞ, Rumania
GYERGYAY (MALATINSZKY), Mrs. E. M.D. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str. Gh. Marinescu 38, TÎRGU-MUREŞ, Rumania
GYÉVAI (TÓTH), Mrs. A. T. — Inst. of Exper. Med. of the Hung. Acad. of Sci., Morphol. Dept., Szigony-u. 43, BUDAPEST VIII, Hungary
GYLLENSTEN, L. J. W. Med.Dr. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden
HACCIUS, Miss B. Dr., Prof. — Inst. für spez. Botanik, Johannes-Gutenberg Univ., 65 MAINZ, W.Germany
a Beeinflussung der Entwicklung von Embryonen durch Chemikalien (Wachstumsregulatoren; Antimitotica; Radiomimetica und Röntgenstrahlen). *Eranthis hiemalis (Ranunculaceae)*
b In vitro Kultur von Embryonen un Geweben. *(Plantae)*
c In vitro culture of callus cells with free tubular connections between the single cells. *Cannabis sativa (Cannabaceae)*
HACH, P. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a Histogenesis of the hypophysis (comparative studies on the submicroscopic structure and enzyme histochemistry). *Mus rattus (Rodentia), Homo sapiens (Primates)*
HADDAD, V. M.D. — Dept. of Physiol., School of Med., Tufts Univ., 136 Harrison Ave., BOSTON, Mass. 02111, U.S.A.
HADFIELD, M. G. Ph.D. — Pacific Biomed. Research Center, Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.
a Sources of yolk and causative factors in the non-development of nurse eggs. (cyto-chemistry, electron, phase-contrast and interference-contrast microscopy). *(Vermetidae, Gastropoda)*
b Spermatogenesis with particular attention to formation of "giant", apyrene spermatozoa (phase-contrast and electron microscopy); centrifugal separation and chemical analysis of the apyrene sperm. *(Vermetidae, Gastropoda)*
HADJUSKI, P. Dr. — Inst. d'Histochim. Méd., Fac. de Méd. de Paris, 45 rue des Sts. Pères, 75 PARIS VIe, France
a Development of the ovary. *(Mammalia)*
HADORN, E. Dr.Phil., Prof. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH-8006 ZÜRICH, Switzerland •
a Determination, transdetermination and differentiation in cells of imaginal discs. *Drosophila melanogaster (Diptera)*
HAGELIN, L. O. Fil.lic. — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, Box 6801, S-113 86 STOCKHOLM, Sweden
HAGET, A. Dr.ès Sci., Prof. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France •
a Analyse expérimentale de la morphogenèse embryonnaire de la tête. *Leptinotarsa* spec. *(Coleoptera), Locusta* spec. *(Orthoptera)*
b Recherches sur l'édification de la blastule et de la gastrule. *Leptinotarsa* spec. *(Coleoptera)*
c Activation du système ovulaire. *Leptinotarsa* spec. *(Coleoptera)*
HAGGIS, A. J. Ph.D., Prof. — Dept. of Biol., Univ. of Detroit, DETROIT, Mich., U.S.A.
HAGIWARA, A. D.Sc. — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan
HAGLUND, Miss B. M. Fil.lic. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden
a Permeability and osmoregulation. *Xenopus laevis, Rana* spp. *(Anura), Siredon mexicanum (Urodela)*
HAGSTROM, J. W. C. M.D., Prof. — Dept. of Pathol., Cornell Univ., 1300 York Ave., NEW YORK, N.Y. 10021, U.S.A.
HAIDER, M. H. M.Sc. — Dept of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India
a Cyclic changes in gonad development. *Nandus nandus (Teleostei)*
b Histomorphological studies on thyroid and pituitary glands in relation to seasonal changes in gonad development. *Nandus nandus (Teleostei)*
HÅKANSSON, L. M.D. — Tornblad-Inst. for Comp. Embryol., Biskopsgatan 7, LUND, Sweden
a Chromosome biochemistry during development. *Gallus domesticus (Aves), Homo sapiens (Primates)*

b Monamine development in the nervous system. *Gallus domesticus (Aves)* (in collaboration with L. NORD)

HALBA, R. M.Sc. — Inst. of Zool., Warsaw Univ., Krakowskie Przedmiéscie 26/28, WARSZAWA 64, Poland

a Ossification of the skull. *(Charadriidae, Aves)*

HALEY, S. R. Ph.D. — Dept. of Zool., Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.

HALFER, Miss C. — Ist. di Genet., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy

a Ovary transplantation. *Drosophila* spec. *(Diptera)*

b DNA replication in cells cultured in vitro. *Drosophila melanogaster (Diptera)*

HALL, B. K. Ph.D. — Dept. of Biol., Dalhousie Univ., HALIFAX, Nova Scotia, Canada

a Studies on the origin of cartilage and bone from common germinal cells. *Gallus domesticus (Aves)*

b Studies on the control of organ size, especially the adrenal gland. *(Gallus domesticus (Aves)*

HALL, Mrs. E. J. B.A. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Ultrastructure of the development of the yolk sec. *Raja binoculata (Selachii)* (in collaboration with P. FORD)

HAM, R. G. Ph.D. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A.

HAMA, T. D.Sc., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan •

HAMADA, K. M.D. — Dept. of Biochem., Nippon Med. School, 1-1-5, Sendagi, Bunkyo-ku, TOKYO, Japan

a Genetic control of hemoglobin switch during metamorphosis. *Rana catesbeiana (Anura)* (in collaboration with A. KAJITA and R. SHUKUYA)

HAMBURGER, K. Cand.mag. — Biol. Inst. of the Carlsberg Found., Tagensvej 16, 2200 COPENHAGEN, N., Denmark

a Studies on respiratory metabolism during early development by means of the gradient diver technique. *Rana oxyrrhinus, R. platyrrhinus (Anura)*

HAMBURGER, V. Ph.D., Prof. — Dept. of Biol., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A. •

a Neuro-embryologie. *Gallus domesticus (Aves)*

b Embryology of behavior. *Chelydra serpentina (Chelonia), Gallus domesticus (Aves), Rattus domesticus (Rodentia)*

HAMBURGH, M. Prof. — Dept. of Biol., City Coll. of the Univ. of New York, Convent Ave. and 139th St., NEW YORK, N.Y. 10031, U.S.A.
— Dept. of Anat., Albert Einstein Coll. of Med., Eastchester Rd. and Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

a Tissue culture of demyelinating mutants. *Mus musculus (Rodentia)*

b Culture of muscle of dystrophic mutants. *Mus musculus (Rodentia)*

c Effect of trypan blue on lysosomal enzymes of the yolk sac placenta of trypan blue treated embryos (histochemistry). *(Mammalia)*

d Effect of trypan blue on ion permeability in the embryo. *(Amphibia)*

e Effect of trypan blue on the expressivity of the brachyury gene, which affects skeletal morphogenesis in a somewhat similar manner as does trypan blue. *Mus musculus (Rodentia)*

f Effect of thyroxin on hormones affecting myelin formation and cell proliferation in nerve tissue culture. *(Rodentia)*

g Correlation of behavioral enzymatic and morphological changes in the developing nervous system as a result of hormone manipulation. *Mus musculus, Rattus norvegicus (Rodentia)*

HAMILTON, H. L. Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va. 22903, U.S.A. •

HAMILTON, Miss L. Ph.D. — Dept. of Biol. as applied to Med., The Middlesex Hosp. Med. School, LONDON W.1, England

a Analysis of haploid syndrome. *Xenopus* spp. *(Anura)*

b Radiation sensitivity of haploid and diploid embryos. *Xenopus laevis (Anura)*

c Investigation of haploid and diploid tissues by electron microscopy. *Xenopus laevis (Anura)* (in collaboration with H. FOX)

HAMILTON, T. H. Ph.D., Prof. — Dept. of Zool., The Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.

a Effects of steroid hormones on genital duct differentiation in embryos studied in vivo and in vitro. *Gallus domesticus (Aves)*

HAMILTON, W. J. Prof. — Dept. of Anat., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C.2, England •

a Development and structure of the placenta. *Homo sapiens (Primates)*

HÄMMERLING, J. Dr.phil., Prof. — Max-Planck-Inst. für Zellbiol., Anton-Dohrn-Weg, Postfach 1009, D 294 WILHELMSHAVEN, W. Germany •

a Nucleo-cytoplasmic relationships. *Acetabularia* spec. and other spp. *(Algae)*

HAMMOND, W. S. Ph.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE, N.Y. 13210, U.S.A. •

a Hypophyseal development in the embryo. *Gallus domesticus (Aves)*

HAMMOUDA, E. I. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt, U.A.R.

HAMNER, Ch. D.V.M., Ph.D. — Dept. of Obstet. and Gynecol., Div. of Reprod. Biol., Univ. of Virginia Med. School, Box 179, CHARLOTTESVILLE, Va. 22903, U.S.A.

a The composition of oviduct secretions of ovariectomized females with and without estrogen and progesterone injections and the effects of these secretions on sperm metabolism, fertilizing ability and blastocyst development. *Oryctolagus cuniculus (Lagomorpha)*

b The role of steroids in capacitation of sperm in the female reproductive tract. *(Mammalia)*

c Reproductive physiology; artificial insemination technique, sperm characterization, seminal plasma constituents, ovulation of the queen with luteinizing hormone and limits of breeding time. *Felis catus (Carnivora)*

HANAOKA, K. I. D.Sc., Prof. — Dept. of Comp. Endocrinol., Inst. of Endocrinol., Gunma Univ., Showa-machi, MAEBASHI, Japan

HANAOKA, Y. M.Sc. — Zool. Inst., Fac. of Sci., Hokkaido Univ., SAPPORO, Japan

HANAWAY, J. K. M.D. — Dept. of Anat., Med. School, Univ. of Virginia, CHARLOTTESVILLE, Va. 22901, U.S.A.

a Development of midbrain, in particular red nucleus and substantia nigra, using radioautography and tissue localization in biogenic amines. *Mus musculus (Rodentia)*

b Histogenesis of cerebellum, with concentration on deep cerebellar nuclei, basket cells, glia and external granular layer (techniques: radioautography, histochemistry and plastic sectioning). *Mus musculus (Rodentia)*

HANCOCK, J. L. Ph.D., Prof. — Dept. of Anat., Royal Vet. Coll., LONDON N.W.1, England

a Intergeneric hybrids. *Capra hircus* x *Ovis aries (Artiodactyla)*

b Fertilization (experimental studies). *Sus scrofa, Ovis aries (Artiodactyla)*

c Developmental pathology of hybrid placenta. *Capra hircus* x *Ovis aries (Artiodactyla)*

d Immunological aspects of foetal-maternal relationships exemplified by hybrid gestation. *Capra hircus x Ovis aries (Artiodactyla)* (in collaboration with P. T. McGOVERN)

HANCOX, N. M. M.D., Prof. — Histol. Dept., Fac. of Med., Univ. of Liverpool, LIVERPOOL, Lancashire, England

HANKE, W. Dr., Prof. — Zool. Inst. der Univ., Siesmayerstr. 70, 6000 FRANKFURTa.M., W.Germany

a Influence of hormones on skin. *Rana temporaria (Anura), Mus musculus (Rodentia)*

b Effects of adrenocortical hormones. *Anguilla anguilla (Teleostei), Ambystoma* spec. *(Urodela), Rana temporaria, Xenopus laevis (Anura)*

c Development of endocrine tissue. *Ambystoma* spec. *(Urodela), Xenopus laevis (Anura)*

HANOCQ, Miss F. A. Lic.Sci.Zool. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium

a Studies on nucleic acid metabolism (chiefly, DNA) during maturation of oocytes, by autoradiography and biochemical methods. *(Amphibia)*

HANOCQ (QUERTIER), Mrs. J. A. Dr.en Sci.Biol. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium •

a Métabolism des acides nucléiques dans les hybrides. *Paracentrotus* spec., *Arbacia* spec. *(Echinoidea), Bufo* spec., *Rana* spec. *(Anura)*

b Studies on protein synthesis in anucleate eggs. *Arbacia* spec. *(Echinoidea)*

c Studies on DNA synthesis during oogenesis. *(Amphibia)*

d Localization of cytoplasmic DNA during embryonic development. *(Amphibia)*

HANSEN-DELKESKAMP, Mrs. E. Dr. — Zool. Inst. der Univ., Physiol. Lehrstuhl, Berlinerstr. 15, 6900 HEIDELBERG, W. Germany

a Metabolism of eggs and embryos. *Gryllus domesticus (Orthoptera)*

HANSON, E. D. Ph.D., Prof. — Dept. of Biol., Wesleyan Univ., MIDDLETOWN, Conn. 06457, U.S.A.

a Developmental genetics of oral structures (techniques: UV microbeam, nucleic acid antimetabolites). *Paramecium aurelia, P. trichium (Ciliata)*

HARA, K. Ph.D. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a Temporal aspects in the process of neural induction by the young head process. *Gallus domesticus (Aves)*

b Cinematographical study of normal cleavage pattern and gastrulation movement. *Ambystoma mexicanum (Urodela), Xenopus, laevis (Anura)* (in collaboration with Miss E. C. BOTERENBROOD)

HARDMAN, G. — Histol. Dept., Fac. of Med., Univ. of Liverpool, LIVERPOOL, Lancashire, England

HARKMARK, W. Dr.med., Prof. — Anat. Inst., Univ. of Bergen, Årstadvollen, BERGEN, Norway

HARPER, M. J. K. Ph.D. — Worcester Found. for Exper. Biol., 222 Maple Ave., SHREWSBURY, Mass. 01545, U.S.A.

a Ovum transport through the reproductive tract. *Oryctolagus cuniculus (Lagomorpha), Rattus rattus (Rodentia)*
b Ovum development and implantation. *Mesocricetus auratus, Rattus rattus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
c Effects of chemical compounds on pregnancy. *Oryctolagus cuniculus (Lagomorpha), Rattus rattus, Mus musculus, Mesocricetus auratus (Rodentia)*
d Fertilization. *Oryctolagus cuniculus (Lagomorpha)*

HARREBOMÉE, Mrs. A. E. Med.drs. — Div. of Exper. Morphol., Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Regeneration blastemata induced in heterotopic positions and their development. *Ambystoma mexicanum (Urodela)*
b Differentiation and de-differentiation during regeneration. *Ambystoma mexicanum (Urodela)*

HARRIS J. W. S. Ph.D. — Dept. of Anat., Royal Free Hosp. Med. School, 8 Hunter St., LONDON, W.C.1, England •

HARRIS, M. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.
a Tissue culture: protein growth factors; evolution of chromosome patterns; drug resistance. *Sus domesticus (Artiodactyla)*
b Thermotolerance of kidney cells in vitro. *Sus domesticus (Artiodactyla)*

HARRISON, J. R. Ph.D., Prof. — Dept. of Biol., State Univ. Coll., OSWEGO, N.Y. 13126 U.S.A.
a In vitro studies on the growth and differentiation of the retinal pigment in the embryonic eye: analysis of developmental factors contained in the yolk-albumen of the egg. *Gallus domesticus (Aves)*
b Uptake of glucose by early primitive streak to early somite embryos studied by using isotope techniques. *Gallus domesticus (Aves)*

HARRISON, R. G. M.A., D.M. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL 3, England
a Factors influencing the process of spermatogenesis. *(Mammalia)*

HARRISON, R. J. M.D., D.Sc., Prof. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England
a Reproduction, gonads, placenta, endocrine organs. *Phoca* spec., *Lobodon* spec. *(Pinnipedia), Tursiops* spec., *Delphinus* spec. *(Cetacea)*

HARTE, Miss C. Dr., Prof. — Inst. für Entw.physiol., Univ. zu Köln, Gyrhostr. 17, 5 KÖLN-Lindenthal, W.Germany
a Interactions between genes and environment in controlling morphogenesis of leaves. *Antirrhinum majus (Scrophulariaceae)*
b Growth of callus, and differentiation in tissue cultures of different mutants. *Oenothera hookeri (Onagraceae), Antirrhinum majus (Scrophulariaceae)*

HARTWIG, H. Dr.Phil., Doz. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
a Wirkungsmechanismus von Schilddrüsenhormonen
b Epithelcysten
c Geweihbildung. *Capreolus capreolus (Artiodactyla)*

HASEGAWA, M. D.Sc., Prof. — Lab. of Biol., Women's Coll. of Tokai-Gakuen, Tenpaku-cho, Shyowa-ku, NAGOYA, Japan

HAŠEK, M. M.D. — Dept. of Exper. Biol. and Genet., Inst. of Biol., Czechoslov. Acad. of Sci., Flemmingovo nám. 2, PRAHA 6, Czechoslovakia •

HASELKORN, R. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Development of chloroplasts in simple plants

HASHIMOTO, K. M.D. — Dept. of Dermatol., School of Med., Tufts Univ., 171 Harrison Ave., BOSTON, Mass. 02111, U.S.A.

HASHIMOTO, K. D.Sc. — Biol. Lab., Kozu High School, Tennoji-ku, OSAKA, Japan
a Relationships between encystment and morphogenesis. *(Colpodidae, Ciliata)*

HASLAUER, J. Ph.D. — Paracelsus-Forschungsinst. für Physiol. und Biophysik, Franz-Josefs-Kai 41, 5020 SALZBURG, Austria

HASSMANNOVÁ, Miss J. M.D., CSc. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia

HATAE, T. Dr.Med. — Dept. of Anat., Fac. of Med., Kyushu Univ., FUKUOKA, 812 Japan
a An electron microscope study of the developing liver. *(Mammalia)*

HATIER (AUTELIN), Mrs. R. Lic.ès Sci. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France

HAUENSCHILD, C. Dr.rer.nat., Prof. — Zool. Inst. der Techn. Univ., Pockelsstr. 10a, 3300 BRAUNSCHWEIG, W.Germany
a Reproduction, sex differentiation, endocrinology and periodicity. *Platynereis, Ophryotrocha* and other spp. *(Polychaeta)*

HAUSEN, P. Dr. — Max Planck Inst. für Biol., Abt. Beermann, Spemannstr. 34, 74 TÜBINGEN, W.Germany

HAY, Miss E. D. M.D., Prof. — Dept of Anat., Harvard Med. School, 25 Shattuck St., BOSTON, Mass. 02115, U.S.A. •

HAY, Miss M. F. Ph.D. — A.R.C. Unit of Reprod. Physiol. & Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England

a Effect of embryotoxic agents on pre-implantation embryos in vivo and in vitro. *Oryctolagus cuniculus (Lagomorpha)*

b Relationship between embryo and corpus luteum. *Ovis aries (Artiodactyla)*

HAY, R. J. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

a Animal viruses (esp. tumor viruses) as tools in studying embryonic development. *Gallus gallus (Aves)* (in collaboration with J. D. EBERT and Mrs. M. YOSHIKAWA-FUKADA)

HAYAKAWA, Miss H. — Dept. of Biol., Osaka Kyôiku Univ., Tennoji-ku, OSAKA, 543 Japan

a Cytodifferentiation during cleavage. *(Amphibia)*

b Nucleo-cytoplasmic interaction during early development. *(Amphibia)*

c Cell interactions in relation to cytodifferentiation. *(Amphibia)*

HAYASHI, I. M.D., Prof. — Pathol. Dept., School of Med., Nagasaki Univ., 93 Sakamoto-machi, NAGASAKI, Japan

HAYASHI, Y. Ph.D., Prof. — Inst. of Zool., Fac. of Sci., Tokyo Kyôiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan •

a Analysis of epithelio-mesenchymal interaction in the formation of the beak. *Gallus* spec. *(Aves)*

b Biochemical analysis of muscle differentiation. *Rana nigromaculata (Anura), Gallus* spec. *(Aves)* (in collaboration with T. HIRABAYASHI)

c Cytochemical studies on primary induction. *Triturus pyrrhogaster (Urodela)*

HAYEK, H. Dr.med., Dr.phil., Prof. — Anat. Inst., Währingerstr. 13, WIEN 9, Austria •

HAYNES, J. F. Ph.D. — Dept. of Zool., Univ. of Maine, ORONO, Me. 04473 U.S.A.

a Growth and form regulation in polyps. *(Hydrozoa)*

b Ultrastructural studies of differentiation. *(Coelenterata)*

HEARSON, L. L. Ph.D. — Dept. of Biol., Wabash Coll. CRAWFORDSVILLE, Ind. 47933, U.S.A.

a Investigations of proliferation, DNA synthesis and nerve fiber patterns in forelimb blastemata. *Ambystoma mexicanum (Urodela)*

b Cytochemistry of dedifferentiation and redifferentiation in denervated limbs. *Ambystoma maculatum, A. opacum (Urodela)*

c Investigation of proliferation patterns in aneurogenic forelimb blastemata. *Ambystoma maculatum, A. opacum (Urodela)*

HEATH, H. D. Ph.D., Prof. — Dept of Biol. Sci., Calif. State Coll. HAYWARD, Calif. 94542, U.S.A.

a Starvation and temperature effects on larval growth rates. *Taricha torosa, Ambystoma tigrinum (Urodela)*

b Control of nematocyst distribution and tentacle number. *Hydra littoralis, Chlorohydra viridissima (Hydroidea)*

HEAYSMAN (WAKELING), Mrs. J. E. M. Ph.D. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a Study of cell relations in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with M. ABERCROMBIE and Mrs. S. M. PEGRUM (HALL))

b Cell migration within the embryo. *Gallus domesticus (Aves)* (in collaboration with Mrs. M. R. BELLAIRS, Dept. of Anat.)

HEBARD, Miss C. N. A.B. — Dept. of Biochem., School of Med., Univ. of Pennsylvania, PHILADELPHIA, Pa., U.S.A.

HEBY, O. — Zoophysiol. Inst., Univ. of Lund, Helgonavägen 3, 223 62 LUND, Sweden

a Polyamines in developing larvae. *Calliphora* spec. *(Diptera)*

HEGGESTAD, C. B. M.D., Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

HEIM, W. G. Ph.D., Prof. — Dept. of Biol., The Colorado Coll., COLORADO SPRINGS, Colo. 80903, U.S.A. •

a Serum proteins during ontogeny. *Gallus domesticus (Aves), Mus rattus (Rodentia)*

b Alpha-2 macroglobulin during development, regeneration and various physiological states. *Mus rattus (Rodentia)*

c Localization of developmental control factors in the embryonic cortex. *Rana pipiens (Anura)*

HEIN, Miss R. R. Ph.D., Prof. — Biol. Dept., Uppsala College, Prospect St., EAST ORANGE,, New Jersey 07019, U.S.A.

a Effect of chemical agents (usually metals) on development and possible correlation with the effect of selected enzyme systems present in developing and regenerating tissues. *Dugesia dorotocephala (Turbellaria), (Echinodermata)*

HEIZMANN, P. Dr.Ing. — Sect. de Biol. Génér. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE. France
a Métabolisme des acides nucléiques. *Euglena gracilis (Euglenophyceae)*
HELFENBEIN, L. L. B.Sc. — Dept. of Biol., Kharkov State Univ., Dzerjinsky Square 4, KHARKOV, U.S.S.R.
a Investigations on the history of embryology. (particularly *Invertebrata)*
HEMMINGS, W. A. D.Sc. — Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caern., Wales, U.K.
a Immunological relations of mother and fetus. *(Mammalia)*
HENDELBERG, J. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Spermiogenesis *(Plathelminthes)*
HENDRICKX, A. G. Ph.D. — Div. of Biol. Growth and Developm., Southwest Found. for Research and Educ., P.O. Box 28147, SAN ANTONIO, Tex. 78228, U.S.A.
a Descriptive morphology of the embryo (fertilization through fourth month). *Papio* spec. *(Primates)*
b Determination of ovulation time. *Papio* spec. *(Primates)*
c Thalidomide induced anomalies. *Papio* spec. *(Primates)*
HENLEY, Miss C. Ph.D. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C. 27515, U.S.A.
HENNEN, Miss S. Ph.D. — Dept. of Biol., Marquette Univ., 530 North 15th St., MILWAUKEE, Wis. 53233, U.S.A.
HENNIG, W. Dr.rer.nat. — Max Planck Inst. für Biol., Abt. Beermann, Spemannstr. 34, 74 TÜBINGEN, W.Germany
a Biochemical aspects of sperm differentiation: Y-chromosome function in spermatogenesis. *Drosophila hydei (Diptera)*
HENRIKSON, R. C. Ph.D. — Med. School, Boston Univ., 80 E. Concord St., BOSTON, Mass. 02118, U.S.A.
HERBERT, C. F. B.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
a Investigation of early neurulation. *Pygoscelis adeliae, P. antarctica, P. papua (Impennae, Aves)*
b Investigation of the development of the supraorbital glands. *Pygoscelis adeliae (Impennae, Aves)*
HERLANT (MEEWIS), Mrs. H. Dr.en Sci.Zool., Prof. — Lab. de Biol. Anim. et Histol. Comp., Univ. libre de Bruxelles, Av. F.D. Roosevelt 50, BRUXELLES 5, Belgium
HERMAN, L. Ph.D., Prof. — Dept. of Pathol., Downstate Med. Center, State Univ. of New York, 450 Clarkson Ave., NEW YORK, Brooklyn, N.Y. 11203, U.S.A.
a Electron microscopy of normal and urethane induced changes in embryonic neural tube cells and lung tissue cells. *Mus musculus (Rodentia)*
HERNANDEZ, Miss C. E. M.D. — Cat. de Embriol., Fac. de Med., Univ. de Los Andes, MÉRIDA, Venezuela
HERNANDEZ (VERDUN), Mrs. D. F. Dr.3e Cycle — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôpital Saint-Antoine, 184 rue du Faubourg Saint-Antoine, PARIS XIIe, France
a Electron microscopy of the placental membrane. *Rattus norvegicus, Mus musculus (Rodentia)*
HEROLD, R. C. Ph.D. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a Developmental study of flight muscle mitochondria structure and function (biochemistry and electron microscopy). *Apis mellifera (Hymenoptera)*
b Development of embryonic fine structure, mitochondria and cell membrane; effect of chemical treatments. *Echinarachnius parma (Echinoidea)*
c Comparative development and ultrastructure of dentines (osteodentine and vasodentine). *Esox lucius, Gadus callarius (Teleostei)*
d Development of embryonic skeletal structure; normal ultrastructure and effect of sodium fluoride. *Echinarachnius parma (Echinoidea)*
HERRMANN, H. M.D., Prof. — Inst. of Cell. Biol., Dept. of Zool., Univ. of Connecticut, STORRS, Conn. 06268, U.S.A. •
HERZBERG, F. M.S. — Dept. of Anat., Center for the Health Sci., Univ. of California, LOS ANGELES, Calif. 90024, U.S.A.
HESS, O. Dr.rer.nat. — Lab. für Chromosomenforsch., Biol. Inst. I der Univ., Schänzlestr. 11, 7800 FREIBURG, W.Germany •
a Experimental embryology. *(Mollusca)*
b Gene physiology, Y chromosome. *Drosophila* spp. *(Diptera)*
c Genetic regulation of differentiation; male germ line cells. *Drosophila* spp. *(Diptera)*
HEWITT, W. M.B., B.S. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E.1, England
a Development of the brain. *Homo sapiens and other* spp. *(Mammalia)*

HEYN, A. N. J. Prof. — Dept. of Biol., Louisiana State Univ. in New Orleans, Lake Front, NEW ORLEANS, La. 70122, U.S.A.
a Egg shell formation and structure. *Gallus domesticus (Aves)*
b Ultrastructure of cell wall in relation to development. *(Plantae)*

HIBBARD, E. Ph.D., Prof. — Dept. of Biol., Coll. of Sci., Pennsylvania State Univ., 208 Life Sciences I, UNIVERSITY PARK, Pa. 16802, U.S.A.
a Effects of polarity on differentiation of sensory structures and outgrowth of nerve fibres. *Xenopus laevis* & other spp. *(Amphibia)*

HICKEY, Miss E. D. M.A. — Div. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, CH-3000 BERN, Switzerland
a Effects of thyroxine on isolated tadpole tails. *Xenopus laevis (Anura)* (in collaboration with R. WEBER)

HICKLIN, Miss J. B. B.A. — Dept. of Biol. as Appl. to Med., The Middlesex Hosp. Med. School, Cleveland St., LONDON, W.1. England
a Investigation of factors controlling polarized regulation of a linear pattern (techniques: cutting, grafting and action of various inhibitors). *Hydra littoralis (Hydrozoa)*

HIKAMI, Y. B.Sc. — Lab. of Anim. Nutr., Fac. of Agric., Kobe Univ., 1 Rokkodai-cho, Nada-ku, KOBE, Japan
a The effect of growth regulating substances on embryonic muscle growth. *Gallus domesticus (Aves)*

HILD, W. J. M.D., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex. 77550, U.S.A.
a In vitro development of retinal explants; differentiation of sensory cells and synaptic complexes. *Rattus norvegicus (Rodentia), Felis domestica (Carnivora)*

HILFER, S. R. Ph.D., Prof. — Dept. of Biol., Temple Univ., Broad and Berks St., PHILADELPHIA, Pa. 19122, U.S.A.
a Effect of pituitary extirpation on reamputation and regeneration or regenerating limbs. *Triturus viridescens (Urodela)*
b Stability of dissociated embryonic thyroid cells as measured by morphological and chemical criteria of differentiation. *Gallus domesticus (Aves)*
c Electron microscopy of differentiating thyroid cells. *Gallus domesticus (Aves)*

HILLMAN, Mrs. N. WILLIAMS Ph.D. — Dept. of Biol., Temple Univ., Broad and Berks St., PHILADELPHIA, Pa. 19122, U.S.A.

HINDMAN, J. L. Ph.D., Prof. — Dept. of Botany, Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.
a Protein changes in the apex during photoperiodic induction, with special interest on the changes associated with the differentiation of the various floral organs. *Chenopodium alba (Chenopodiaceae)*
b Factors affecting formation of callus from floral apices and the subsequent differentiation of the callus tissue into organized buds. *Nicotiana tabacum (Solanaceae), Aquilegia* spec. *(Ranunculaceae)*

HINDS, J. W. Ph.D. — Dept. of Anat., School of Med., Boston Univ., 80 E. Concord St., BOSTON, Mass. 02118, U.S.A.
a Golgi impregnation and electron microscopic study of neurogenesis and gliogenesis in the olfactory bulb. *Mus musculus, Rattus domesticus (Rodentia)*

HINRICHSEN, K. Dr.med., Prof. — Anat. Inst. der Univ., Österbergstr. 3, 74 TÜBINGEN, W.Germany

HINSCH, Miss G. W. Ph.D., Prof. — Inst. of Molec. Evolut., Univ. of Miami, 521 Anastasia Ave., CORAL GABLES, Fla. 33134, U.S.A.

HINTON, H. E. Ph.D., D.Sc., Prof. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England

HIRABAYASHI, T. M.A. — Inst. of Zool., Fac. of Sci., Tokyo Kyoiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan

HIRADHAR, P. M.Sc. — Dept. of Zool., Fac. of Sci., M.S. Univ. of Baroda, BARODA-2. India
a Tail regeneration in the adult. *Hemidactylus flaviviridis (Lacertilia)*

HIRAIWA, Y. K. † D.Sc., Prof. — Seinan Gakuin Univ., FUKUOKA, Japan (deceased)

HIRAKOW, R. D.Med.Sc. — Dept. of Anat., School of Med., Tokyo Med. and Dental Univ., Yushima, Bunkyo-ku, TOKYO, Japan

HIRAMOTO, Y. D.Sc., Prof. — Misaki Marine Biol. Station, Univ. of Tokyo, MISAKI, Kanagawa-ken, Japan
a Cell division. *(Echinoidea)*
b Physical properties of marine eggs. *(Echinoidea)*
c Physiological studies on fertilization. *(Echinoidea)*

HIRANO, C. Ph.D. — Div. of Entomol., Natl. Inst. of Agric. Sci., Nishigahara, Kita-ku, TOKYO, Japan

HIRN, M. Dipl.d'Etud.Approf. — Lab. de Morphogénét. Anim., Fac. des Sci., Place Victor Hugo, 13 MARSEILLE 3, France
a Regeneration. *Cercyra hastata (Turbellaria)*
HISAOKA, K. K. Ph.D. — Natl. Inst. of Dent. Res., Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A.
(no embryological work in progress)
HISHIDA, T. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
HOADLEY, L. Ph.D., Prof. (Emer.) — Biol. Labs., Harvard Univ., 16 Divinity Ave., CAMBRIDGE, Mass. 02138, U.S.A. •
HOAR, R. M. Ph.D. — Teratol. Sect., Dept. of Exper. Pathol. and Toxicol., Research Div., Hoffman-La Roche Inc., NUTLEY, N.J. 07110, U.S.A.
a Studies on the relationship between hyperadrenal conditions and birth defects, in particular glucose-6-phosphate dehydrogenase in the spinal cord of developing embryos exposed to maternal hyperadrenocorticalism. *Cavia porcellus (Rodentia)*
HOARAU, F. Dr.spéc. — Lab. de Morphogénét. Anim., Fac. des Sci., 1 Place Victor Hugo, 13 MARSEILLE 3, France
a Analyse des territoires de régénération. *Helleria brevicornis (Isopoda, Crustacea)*
HOBBS, M. J. Ph.D. — Dept. of Anat., Univ. Coll., Gower St., LONDON W.C.1, England
a Differentiation in colonial forms. *Pleodorina* spp. *(Volvocales, Chlorophyceae)*
HÖCKER, W. Dr.rer.nat. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W. Germany
a The effects of STH and LTH and of auxiliary hormones on the postembryonal growth. *Columba palumbus (Aves)*
HOFMAN, Miss L. M.Sc. — Inst. of Biol., Univ. of Zagreb, Šalata, ZAGREB, Yugoslavia
a Regulation of compensatory growth. *Rattus norvegicus (Rodentia)* (in collaboration with M. MÜLLER)
HOFMANN, D. K. Dr.rer.nat. — Inst. für Entw. physiol., Univ. zu Köln, Gyrhofstr. 17, 5 KÖLN-Lindenthal, W.Germany
a Experimental studies on the endocrine control of caudal regeneration. *Platynereis dumerilii (Polychaeta)*
b Histological investigations on cranial and caudal regeneration. *Eunice viridis (Polychaeta)*
c Neurosecretory phenomena in the central nervous system of specimens of different sexual development stage. *Eunice viridis (Polychaeta)*
HÖGLUND, L. R. Fil.kand. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden
a Polysaccharide metabolism, especially glycoproteins and mucopolysaccharides. *Rana* spp. *(Anura)*
HOHL, H. R. Dr.sc.nat., Prof. — Dept. of Anat. and Cytol., Univ. of Zürich, Birchstr. 95, 8050 ZÜRICH, Switzerland
a Submicroscopic morphogenesis. *Dictyostelium discoideum* and other spp. *(Acrasiales)*
b Submicroscopic morphogenesis. *Phytophthora parasitica* and other spp. *(Phycomycetes)*
HOLAK, H. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
a Development of ultimobranchial body. *(Amphibia)*
HOLLAND, J. J. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Action of viruses on development. *(Mammalia)*
b Translational factors in cellular differentiation. *(Mammalia)*
HOLLYFIELD, J. G. Ph.D. — Dept. of Ophthalmology, Coll. of Physicians and Surgeons, Columbia Univ., 630W. 168th St., NEW YORK, N.Y. 10032, U.S.A.
a Retinal changes at metamorphosis. *Rana pipiens, Xenopus laevis (Anura)*
b Growth of the visual system. *Xenopus laevis (Anura)*
HOLM, K. Å. Fil.Dr. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a Experimental investigation of the embryo (determination, prospective significance of embryonic areas). *(Araneae, Arachnoidea)*
HOLSTEIN, A.-F. Dr.med. — Anat. Inst. der Univ. Hamburg, Martinistr. 52, 2-HAMBURG 20, W. Germany
a Morphologische und Elektronenmikroskopische Untersuchungen zur Entwicklung der ableitenden Samenwege. *Homo sapiens (Primates)*
b Fluoreszenzmikroskopische Untersuchungen der Spermatozoen. *Oryctolagus cuniculus (Lagomorpha)*
c Entwicklung des Hodens. *Homo sapiens (Primates)*
HOLTER, H. Ph.D. — Physiol. Dept., Carlsberg Lab., 10, Gl.Carlsbergvej, COPENHAGEN, Valby, Denmark •
HOLTFRETER, J. K. F. Ph.D., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A. •
HOLTZER, H. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A. •

HOMANN, H. Dr.rer.nat. — I. Physik. Inst., Univ. Göttingen, Bunsenstr. 9, 34 GÖTTINGEN, W.Germany

a Development of eyes. *(Araneae, Oxyopidae, Ctenidae, Zoropsidae, Agelenidae, Dysderidae, Philodromidae, Araneida)*

HOPERSKAYA, Mrs. O. A.— Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Transfilter induction of lenses, neural and retinal tissues by eye rudiments in gastrula ectoderm and the dependence of their appearance of the duration of induction. *Rana temporaria (Anura)*

b Analysis of inductive interactions of the cells of differentiating retina by means of combinations of cells of the eye rudiment and gastrula ectoderm. *Rana temporaria, R. esculenta (Anura), Gallus domesticus (Aves)* (in collaboration with G. V. LOPASHOV)

c Analysis of conditions of the initiation of development and the positioning of axial rudiment in the early blastoderm. *Leuciscus bergi (Cyprinidae), Epiplatys shaperi (Cyprinidontidae, Teleostei)*

HORI, R. D.Sc. — Biol. Inst., Fac. of Lit. and Sci., Toyama Univ., Gofuku 3190, TOYAMA (930) Japan

a Sodium and potassium content, ionic permeability and fertilization phenomena (radioisotope studies). *Hemicentrotus pulcherrimus (Echinoidea), Oryzias latipes (Teleostei)*

HORIKAWA, M. D.Sc. — Dept. of Genet., Univ. of Wisconsin, MADISON, Wis. 53706. U.S.A. •

HORKÝ, Z. M.D. — Dept. of Obstet. and Gynecol., Med. School, Univ. of Greifswald, X 22 GREIFSWALD, East.Germany

HORN, E. C. Ph.D., Prof. — Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.

a Isolation and characterization of cytoplasmic histones in embryonic cells. *(Amphibia)*

b Hemolymph protein changes and carotenoid pigment distribution during the reproductive cycle. *Callinectes sapidus (Decapoda, Crustacea)*

c Ontogenesis of the immune mechanism. *(Marsupialia)*

HÖRNBLAD, P. Y. M.D. — Lab. of Teratol., Karolinska Inst., S-104 01 STOCKHOLM 60, Sweden

a Experimental studies on closure of the ductus arteriosus and causes of its patency. *Oryctolagus cuniculus (Lagomorpha), Mus musculus, Rattus norvegicus, Cavia porcellus (Rodentia), Sus domesticus, Ovis aries (Artiodactyla)*

HORNBY, Miss J. E. B.Sc. — Dept. of Zool., Fac. of Sci., Univ. of Reading, READING RG1 5AQ, Berks, England

a Studies on the adhesion of embryonic cells *(Aves; Mammalia)*

HORSFALL, W. R. Ph.D., Prof. — Dept. of Entomol., Univ. of Illinois, 320 Morrill Hall, URBANA, Ill. 61801, U.S.A.

a Imaginal teratogenesis by thermal stress (morphological and histological changes). *Aedes sierrensis, A. punctor, A. communis, A. stimulans, A. nigripes, A. impiger (Culicidae, Diptera)*

HÖRSTADIUS, S. Fil.Dr., Prof. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden •

a Determination in the egg; analysis of the gradients and the processes behind them. *(Echinoidea)*

b The effect of various antimetabolites on embryonic development. *(Echinoidea)*

HORSTMANN, E. Dr.med. et phil., Prof. — Anat. Inst. der Univ. Hamburg, Martinistr. 52, 2000 HAMBURG-Eppendorf, W.Germany

a Spermatozoen und ductus epididymidis. *Oryctolagus cuniculus, Canis familiaris, Homo sapiens (Mammalia)*

b Electron microscopic studies of spermatozoa and spermatogenesis. *Ornithodorus moubata (Argasidae; Acarina), Geophilus linearis (Chilopoda), Graphidostreptus* spec. *(Diplopoda)*

HORSTMANN, H.-J. Dr.phil.nat. — Physiol.-Chem. Inst. der Univ. Erlangen-Nürnberg, Wasserturmstr. 5, 852 ERLANGEN, W.Germany
(no embryological work in progress)

HORTON, K. M. A.B. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

a Hormonal interactions and protein synthesis in mature oocytes. *Xenopus laevis (Anura)*

HORVÁTH, Miss C. M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary

a Teratogenesis. *Gallus domesticus (Aves), Rattus rattus (Rodentia)*

HOSHI, M. M.Sc. — Biol. Inst., Coll. of Gen. Educ., Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

HOSHINO, K. M.D., D.med.Sc., Prof. — Dept. of Anat., Health Sci. Center, Univ. of Western Ontario, LONDON, Ont., Canada

a Development and growth of mammary glands after prenatal exposure to hormones and carcinogen. *Mus musculus (Rodentia)*

b Influences of hormones and carcinogen upon mammary growth of male and female immature animals. *Mus musculus (Rodentia)*
c Regeneration of transplanted mammary glands. *Mus musculus (Rodentia)*

HOSHINO, K. M.D. — The Research Inst. of Environm. Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, 464 Japan
a Effects of ionizing radiations upon embryos of different species. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI, Y. KAMEYAMA and Miss T. NAKAYAMA)
b Effects of some chemical substances upon the embryo. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with Y. KAMEYAMA)
c The skeletal development of the embryo. *Mus musculus, Rattus norvegicus (Rodentia)*
d Morphogenesis of exencephalia and its allied conditions. *Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI)
e Morphogenesis of spina bifida and its allied conditions. *Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI)

HOTTA, Y. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Regulation of DNA synthesis during meiotic development. *Trillium erectum, Lilium longiflorum, Tulipa gesneriana, Vicia faba, Bellevalia romana*

HOUGH (RAYMOND), Mrs. B. R. Ph.D. — Rockefeller Univ., 66th St. and York Ave., NEW YORK, N.Y. 10021, U.S.A.
a Study of gene activity in oogenesis, the species and function of nucleic acids produced in lampbrush stage oocytes. *Xenopus laevis (Anura)* (in collaboration with E. H. DAVIDSON)
b Study of the molecular basis of cytoplasmic prelocalization. *Ilyanassa obsoleta (Gastropoda)* (in collaboration with E. H. DAVIDSON)

HOUILLON, Ch. Dr.ès Sc., Prof. — Lab. de Biol. Anim. (2e sect.), Fac. des Sci., Univ. de Paris, 12 rue Cuvier, 75 PARIS Ve, France

HOURDRY, J. — Lab. d'Anat. Comp., Fac. des Sci. d'Orsay, Univ. de Paris, Bâtiment 441, 91-ORSAY, France
a Modifications de l'épithelium intestinal au cours de la métamorphose (microscopie électronique). *Discoglossus pictus, Alytes obstetricans (Anura)*

HOUTHOFF, H. J. Med.Drs. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Degeneration and regeneration of anterior horn cells in the spinal cord of spinal ganglion cells and of the proximal stump following sciatic axotomy (histological and histochemical methods). *Gallus gallus (Aves)*

HROCH, M. Dr. — Dept. of Biol., Med. Fac., Charles Univ., Šimkova 870, HRADEC KRÁLOVÉ, Czechoslovakia
a Nucleolus during myogenesis i n v i t r o studied by phase-contrast time-lapse cinematography. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)* (in collaboration with J. GAYER and V. PŮŽA)

HSÚ (LIANG), Mrs. C. Y. Ph.D., Prof. — Dept. of Biomorphics, Natl. Defense Med. Center, P.O. Box 7432, TAIPEI, Taiwan, Republ. of China
a The action of aureomycin on the growth of thyroidectomized tadpoles. *Rana catesbeiana (Anura)*
b Ageing of thyroidless tadpoles. *Rana catesbeiana (Anura)*
c Urine nitrogen of thyroidectomized tadpoles. *Rana catesbeiana (Anura)*
d The effect of aureomycin on tadpole development as influenced by temperature. *Rana narina (Anura)*
e Food intake of aureomycin-treated tadpoles. *Rana catesbeiana (Anura)*
f Correlation between experimental sex-differentiation and pituitary cytology. *Rana catesbeiana (Anura)*
g The mechanism of growth-promoting effect of aureomycin in young animals. *Gallus domesticus (Aves)*
h Experimental sex reversal with high temperature. *Rana* spp. *(Anura)*

HUANG, Ru Chih C. Ph.D. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th St., BALTIMORE, Md. 21218, U.S.A.
a Chemistry of chromosomal protein and chromosomal RNA. *Gallus domesticus (Aves)*
b Regulation of gene function at the molecular level. *Gallus domesticus (Aves)*

HUBBY, J. L. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Physiological genetics. *Drosophila* spec. *(Diptera)*

HUBER, W. D.Sc., Prof. — Naturhist. Museum, Bernastr. 15, CH-3000 BERN, Switzerland
a Biometrie des Schädels. *Canis familiaris (Carnivora), Capreolus capreolus, Rupicapra rupicapra (Artiodactyla)*
b Postembryonales Wachstum. *Canis familiaris (Carnivora)*
c Geschlechtszyklus. *Rupicapra rupicapra (Artiodactyla)*

HUBERT, J. D.E.S. — Lab. de Biol. Anim., 1 Av. Vercingétorix, 63 CLERMONT-FERRAND, France
a Régulation de l'oeuf. *Lacerta vivipara (Lacertilia)*
b Lignée germinale; étude descriptive et expérimentale; ultrastructure de la cellule germinale. *Lacerta agilis, Anguis fragilis, Vipera aspis (Reptilia)*

HUBSCHMAN, J. H. Ph.D. — Dept. of Biol., Div. of Sci. and Engin., Wright State Univ., Col. Glenn Highway, DAYTON, Ohio 45431, U.S.A.
a Endocrine control of growth and development (metamorphosis) in larvae. *Palaemonetes* spp. *(Decapoda, Crustacea)*

HUCKINS, Miss C. Ph.D. — Dept. of Anat., McGill Univ., MONTREAL 2, Que., Canada
a The morphology of the spermatogonial population in growing animals as visualized on segments of seminiferous tubules mounted in toto. *Rattus norvegicus (Rodentia)*
b The cell cycle times of the spermatogonial population in prepuberal animals using whole mount radioautography. *Rattus norvegicus (Rodentia)*

HUET, C. — Lab. de Biol. Anim., Univ. de Paris, Fac. des Sci. d'Orsay, 91 ORSAY, France
a Développement de l'appareil génital ♂ et ♀ de la larve. *Tenebrio molitor (Coleoptera)*

HUET, M. Lab. de Biol. Anim., Univ. de Paris, Fac. des Sci. d'Orsay, 91 ORSAY, France
a Régéneration (influence des rayons X, du système nerveux). *Asterina gibbosa (Asteroidea)*

HUGHES, A. F. W. Ph.D., D.Sc. — Dept. of Anat., School of Med., Western Reserve Univ., CLEVELAND, Ohio, U.S.A.

HULTIN, J. M. T. Fil.Dr. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden •
a Protein and nucleic acid metabolism in early development. *Artemia salina (Anostraca, Crustacea), (Echinoidea)*

HUMEAU, C. Lab. d'Histol., Fac. de Méd., 2 rue Ecole de Médecine, 34 MONTPELLIER, France
a Electron microscopic study of oogenesis. *(Amphibia)*
b Electron microscopic study of atretic oocytes. *Triturus helveticus (Urodela)*

HUMIŃSKI, S. Dr.hab. — Chair of Zool., Coll. of Agricult., Cybulskiego 20, WROCŁAW, Poland
a Influence of food, light, temperature and hormones on the male sexual apparatus during the resting period. *Microtus arvalis, M. agrestis (Microtidae, Rodentia), Apodemus agrarius A. flavicollis, Mus musculus (Muridae, Rodentia)*

HUMMEL, Miss K. P. Ph.D. — The Jackson Lab., BAR HARBOR, Me. 04609, U.S.A.
a Developmental anatomy and genetics. *Mus musculus (Rodentia)*

HUMPHREY, R. R. Ph.D., Prof. (Emer.) — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind. 47401, U.S.A. •

HUMPHREY, Miss T. M.D., Ph.D., Prof. — Dept. of Anat., Univ. of Alabama Med. Center, 1919 Seventh Ave. South, BIRMINGHAM, Ala. 35233, U.S.A. •

HUMPHREYS, T. D. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a RNA and protein synthesis in embryos. *Arbacia punctulata, Strongylocentrotus purpuratus, Lythechinus pictus, (Echinoidea)*
b Characterization of aggregation factor. *Microciona prolifera, M. parthena, Haliclona occulata (Porifera)*

HUMPHREYS, W. J. Ph.D., Prof. — Electr. Micr. Lab., Univ. of Georgia, Barrow Hall, ATHENS, Ga. 30601, U.S.A.
a Ultrastructure of blastomeres in mosaic eggs. *Mytilus edulis (Lamellibranchia)*
b Desiccated cytoplasm of viable, encysted embryos is studied by transmission electron microscopy of thin sections, replicas of frozen-fractured preparations, and by scanning electron microscopy. *Artemia salina (Anostraca)*
c Macromolecular structures in extracellular coats of unfertilized and fertilized eggs are compared by electron microscopy of replicas of frozen-etched preparations. *Strongylocentrotus purpuratus (Echinoidea)*

HUMPHRIES, A. A., Jr. Ph.D., Prof. — Dept. of Biol., Emory Univ., ATLANTA, Ga. 30322, U.S.A.
a Oviduct-oocyte relationships. *(Amphibia)*
b Chemistry and physiology of egg jelly. *(Amphibia)*
c Ultrastructure of oocytes. *(Amphibia)*
d Fertilization. *(Amphibia)*

HUNT, Miss D. M. A.B. — Worcester Found. for Exp. Biol., 222 Maple Ave., SHREWSBURY, Mass. 01545, U.S.A.
a Fertilization in vivo and in vitro, gonadogenesis, and irradiational effects on early embryonic stages (morphology and physiology). *Oryctolagus cuniculus, Lepus americanus, Sylvilagus transitionalis (Lagomorpha), Cavia porcellus, Mus musculus, Rattus rattus, Mystromys albicaudatus, Mesocricetus auratus, (Rodentia) Mustela furio (Carnivora)*

HUNT, E. L. Ph.D., D.Sc., Prof. — Dept. of Biol., Emory Univ., ATLANTA, Ga. 30322, U.S.A.

a Studies on the estrus cycle and gestation in alloxan-diabetic animals. *Rattus norvegicus (Rodentia)*
b Developmental pathology of the endocrine pancreas. *Gallus domesticus (Aves)*

HUNTER, R. M. B.S. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada
a Microspectro-photometric analysis of pseudoplasmodial differentiation. *Dictyostelium discoideum (Acrasiales)* (in collaboration with D. W. FRANCIS)

HUREAU, J. Prof. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

HÜRLIMANN, R. dipl.phil.II — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH 8006 ZÜRICH, Switzerland
a Protein pattern during development as revealed by disc-electrophoresis. *Drosophila melanogaster, Phormia regina (Diptera)*

HUSON, A. M.D. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg 62, LEIDEN, Netherlands
a Development of vertebral column. *Homo sapiens (Primates)*

HUVER, C. W. Ph.D., Prof. — Dept. of Zool., Coll. of Biol. Scis., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
a Cytology of fertilization. *Fundulus heteroclitus (Teleostei)*
b Mechanism of blastodisc formation; site and origin of blastodisc. *(Teleostei)*
c Sex differentiation. *Anguilla bostoniensis (Teleostei)*
d Hermaphroditism. *Gasterosteus aculeatus (Teleostei)*
e Cytochemistry of spermatogenesis. *Fundulus diaphanus (Teleostei)*
f Growth. *Perca flavescens (Teleostei)*
g Chromosome numbers. *Fundulus heteroclitus, F. diaphanus (Teleostei)*

HYODO (TAGUCHI), Mrs. Y. D.Sc. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan
a Change in radiosensitivity of germ cells during embryonic development. *Oryzias latipes (Teleostei)*
b Embryology of reproductive organs. *Oryzias latipes (Teleostei)*

ICHIKAWA, A. D.Sc., Prof. (Emer.) — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 10, West 8, SAPPORO, 060 Japan
a Development and life-history of Japanese forms. *(Rhizocephala, Crustacea)*
b Propagation and regeneration. *(Turbellaria)*

ICHIKAWA, M. D.Sc., Prof. (Emer.) — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, Kitashirakawa, Sakyo-ku, KYOTO, Japan

IFFT, J. D. Ph.D., Prof. — Dept. of Anat., School of Med., Boston Univ., 80 E. Concord St., BOSTON, Mass. 02118, U.S.A.
a Autoradiagraphic studies of hypothalamus development. *Rattus domesticus (Rodentia)*

IGNATJEVA, Mrs. G. M. Cand.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St 26, MOSCOW B-133, U.S.S.R.
a Investigation of the relative duration of embryonic periods in connection with the morphogenetic function of yolk. *Misgurnus fossilis, Esox lucius, Carassius carassius* and other spp. *(Teleostei), Ambystoma mexicanum (Urodela)*

IKEDA, Miss M. Ph.D. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan
a UV-irradiation and SH radicals in eggs. *Hemicentrotus pulcherrimus (Echinoidea)*
b Protein synthesis in synchronized cultures. *Tetrahymena* spec. *(Holotricha, Ciliata)*
c Protein synthesis in eggs. *Hemicentrotus pulcherrimus (Echinoidea)*

IKUSHIMA, N. D.Sc. — Biol. Lab., Kansai Med. School, HIRAKATA, Osaka Pref., Japan

ILIES, A. Dr.Biol.Sci. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania
a Normal and pathological necrotic areas in embryonic development. *Homo sapiens (Primates)*

IMAHORI, K. D.Sc., Prof. — Dept. of Biol., Coll. of Gen. Educ., Osaka Univ., Toyonaka, OSAKA, 560 Japan
a Morphogenesis, especially of sporelings. *(Characeae)*

IMAIZUMI, T. D.Sc. — Zool. Inst., Fac. of Sci., Univ. of Kyoto, Sakyo-ku, KYOTO, Japan

IMBERSKI, R. B. Ph.D. — Dept. of Zool., Univ. of Maryland, COLLEGE PARK, Md. 20742, U.S.A.
a Stage-specific and tissue-specific occurrence of proteins during development. *Drosophila melanogaster (Diptera), Ephestia kühniella (Lepidoptera)*
b Regulation of gene expression during development. *Drosophila melanogaster (Diptera), Ephestia kühniella (Lepidoptera)*

IMMERS, J. Fil.Dr. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden
a Biochemical factors in development, particularly the role of mucopolysaccharides. *(Echinoidea)*

b Changes in interaction between proteins and nucleic acid in the course of early development. *Paracentrotus lividus, Psammechinus miliaris (Echnoidea)*

IMOH, H. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812, Japan

a Basic proteins in developing embryos. *Triturus pyrrhogaster (Urodela)*

b Changes in macromolecular synthesis and composition during primary induction. *Triturus pyrrhogaster (Urodela)*

INFANTE, A. A. Ph.D. — Dept. of Biol., Wesleyan Univ., MIDDLETOWN, Conn. 06457, U.S.A.

a Control of protein and nucleic acid synthesis during embryonic development (density gradient centrifugation, in vivo and in vitro protein synthesis, electrophoretic separations). *Strongylocentrotus purpuratus, Lytechinus pictus (Echinoidea)*

INOUÉ, S. Ph.D. — Lab. de Biol. Moléc., Univ. de Montréal, B.P. 6128, MONTRÉAL, Que., Canada

a Morphological and biochemical studies of the fertilization membrane, treatment of the isolated membrane with enzymes and chemicals, electron microscopy. *Strongylocentrotus purpuratus (Echinoidea)*

b The fine structure of the egg surface membrane system (plasma and vitelline membrane) and its changes after fertilization, studied on isolated membrane system and on embedded eggs. *Arbacia punctulata, Strongylocentrotus purpuratus. (Echinoidea)*

IOANNOU, J. M. Ph.D. — Dept. of Anat., School of Med., LEEDS LS2 9NL, England

a Fine structure and metabolic activity of oogonia and oocytes. *Cavia cobaya (Rodentia)*

b Fine structure of female germ cells. *Meriones meriones (Rodentia)*

c Maturation of female germ cells in vitro. *Cavia cobaya, Meriones meriones (Rodentia)*

IRIE, R. B.S. — Natl. Inst. of Anim. Industry, CHIBA-shi, 280 Japan

a UV-resistance of transforming DNA in germinating spores. *Bacillus subtilis (Bacteria)*

ISHIDA, J. D.Sc., Prof. — Dept. of Biochem., Fac. of Sci. and Engin., Saitama Univ., Shimo-Okubo 255, URAWA-City, Japan

a Crystallization of hatching enzyme and its biosynthesis as a marker of cyto-differentiation. *Oryzias latipes (Teleostei)*

b Mode of action of hatching enzyme in blastulae. *Hemicentrotus pulcherrimus (Echinoidea)*

ISHIKAWA, M. D.Sc. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, (517) Japan

a Physiological studies on fertilization and artificial parthenogenesis. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)* (in collaboration with M. SUGIYAMA)

ISHIKAWA, T. Dr.Vet.Med., Prof. — Dept. of Vet. Obstet., Fac. of Vet. Med., Hokkaido Univ., N 18, W 9, SAPPORO, (060) Japan

a Cytogenetic investigation of congenital anomalies. *Bos taurus (Artiodactyla)*

ISHIZAKI, H. D.Sc. — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, Kitashirakawa, Sakyo-ku, KYOTO, Japan

ISONO, N. Ph.D. — Embryol. Sect., Biol. Dept., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan

a Carbohydrate metabolism of eggs. *Hemicentrotus pulcherrimus (Echinoidea)*

b Acid soluble nucleotides of eggs and sperm. *Hemicentrotus pulcherrimus (Echinoidea)*

ITO, I. M.D. — Natl. Cancer Centre Hosp., Tsukiji 5 chome, Chuoku, TOKYO, Japan

ITO, R. M.S. — Dept. of Anat., Fac. of Med., Tokyo Med. and Dental Univ., 1-5-47, Yushima, Bunkyo-ku, TOKYO, 113 Japan

a Mechanism of resorption of collagen fibres in the metamorphosing tadpole tail. *Rana catesbeiana, R. japonica, Bufo vulgaris (Anura)*

IUCIF, S. Ph.D. — Dept. de Morfol. Hum. Func. e Aplic., Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, RIBEIRÃO PRÊTO, S.P., Brazil

a Allometric growth of the skull and the dental arch. *(Rodentia)*

b Allometric growth of thyroidectomized animals. *Rattus rattus (Rodentia)* (in collaboration with A. R. CRUZ)

c Allometric growth of the eye in hemispherectomized animals. *Rattus rattus (Rodentia)* in collaboration with R. AZOUBEL and A. R. CRUZ)

d Effect of hemispherectomy on the thyroid gland. *Rattus rattus (Rodentia)* (in collaboration with R. AZOUBEL and A. R. CRUZ)

IVANOVA (KASAS), Mrs. O. M. Dr.biol.sci., Prof. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

IVEMARK, B. I. M.D., Prof. — Dept. of Pediat. Pathol., Karolinska Hosp., 10401 STOCKHOLM, Sweden

a Anatomy and pathology of the placenta (micro-angiography). *Homo sapiens (Primates)*

b Lipid histochemistry of the placenta in pathologic pregnancy. *Homo sapiens (Primates)*

c Fetal and neonatal immunity as reflected in the thymus and spleen (immunofluorescence). *Homo sapiens (Primates)*

IVERSON, R. M. Ph.D., Prof. — Dept. of Biol., Univ. of Miami, CORAL GABLES, Fla. 33124, U.S.A.

a Nucleic acids during development. *Lytechinus variegatus (Echinoidea)*

b Development of the mitotic apparatus and protein synthesis in eggs and embryos. *(Echinoidea)*

IWAMATSU, T. Ph.D. — Biol. Lab., Aichi-Kyoiku Univ., KARIYA-City, Aichi, Japan — Worcester Found. for Exper. Biol., 222 Maple Ave., SHREWSBURY, Mass. 01545, U.S.A.

a Maturation of gametes. *Oryzias latipes (Teleostei)*

b Fertilization. *Mesocricetus auratus, Mus musculus, Rattus norvegicus (Rodentia)*

IWASA, K. D.Sc. — Dept. of Biol., Coll. of Gen. Educ., Osaka Univ., Toyonaka, OSAKA, 560 Japan

a Physiological, morphological and biochemical studies on the formation of multi-cellular bodies from unicellular stages. *Chlamydomonas* spec., *Chlorella* spec. *(Chlorophyceae), Phaeodactylum tricornutum (Diatomeae)*

b Sexual differentiation and recombination. *Chlamydomonas* spec. *(Chlorophyceae), Phaeodactylum tricornutum (Diatomeae)*

IWASAKI, T. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan

a Effects of ionizing radiations on embryonic development. *Artemia salina (Anostraca, Crustacea)*

b Cytological studies on the radiosensitivity of spermatogenesis. *Bombyx mori (Lepidoptera)*

IWASAWA, H. D.Sc. — Biol. Inst., Fac. of Sci., Niigata Univ., NIIGATA, Japan

a Embryological study on endocrine correlation. *(Amphibia)*

b Comparative anatomy of genital system. *(Amphibia)*

c Comparative histology of endocrine organs. *(Amphibia)*

IWATA, F. D.Sc. — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 10, West 8, SAPPORO, 060 Japan

a Studies on the comparative embryology with special reference to taxonomic interrelationships. *(Nemertea)*

b Development and regeneration. *Lineus vegitus (Nemertea)*

c Comparative embryology of some marine animals. *Notoplana humilis (Polycladida, Turbellaria), Pugettia quadridens (Brachyura, Decapoda), Dendrodoris rubra (Opisthobranchia, Gastropoda)*

IYEIRI, Mrs. S. D.Sc. — Dept. of Biol., Fac. of Sci., Kuyshu Univ., Hakozaki, FUKUOKA, 812 Japan

a RNA metabolism of dissociated embryonic cells being affected by inductive agents. *(Amphibia)*

b RNA-polymerase of the egg. *Artemia salina (Anostraca, Crustacea)*

IZAWA, K. B. Fish. — Hamajima Marine Biol. Station, c/o Fac. of Fish., Pref. Univ. of Mie, 158 Edobashi 2-chome, TSU, Mie Pref. 514 Japan

a Postembryonic development: Chalimus and copepodid stages. *Caligus* spec. *(Copepoda, Crustacea)*

JACCARINI, Rev. V. M.A. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a Analysis at cellular level of morphogenetic movements in sternum development. *Coturnix coturnix japonica; Gallus domesticus (Aves), Mus musculus (Rodentia)*

JACOB, J. Ph.D. — M.R.C. Epigenet. Research Group, Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.

a Ultrastructure and ultrastructural cytochemistry of nucleolus in larval salivary gland cells. *Smittia parthenogenetica (Chironomidae, Diptera)*

b Ultrastructural changes and patterns of RNA and protein synthesis in differentiating cells as studied by E. M. autoradiography. *Triturus alpestris (Urodela), Xenopus laevis (Anura)*

c Synthesis and transformations of cellular membranes: nuclear membranes in Hela cells; endoplasmic reticulum in cement gland cells of embryo. *Xenopus laevis (Anura)* (in collaboration with C. H. WADDINGTON and Miss M. M .PERRY)

d Nature of involvement of nucleolus in virus induced Lucké tumour cells. *Rana pipiens (Anura)*

JACOBS, R. M. Ph.D. — Dept. of Oral Biol., Coll. of Dent. Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a Placental transmission of muscle relaxants and their teratogenic effects. *Mus musculus (Rodentia)*

JACOBS, W. P. Ph.D. — Dept. of Biol., Princeton Univ., PRINCETON, N.J. 08540, U.S.A.

a Experimental developmental morphology, using controlled environment chambers, electronic computer processing of data, and studies of hormonal effects on organ and cell differentiation. *Caulerpa prolifera (Siphonales, Algae), Coleus blumei (Labiatae). Xanthium pennsylvanicum (Compositae)*

JACOBSON, A. G. Ph.D., Prof. — Dept. of Zool., The Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.

a Induction and positioning of the nose, lens and ear. *Taricha torosa (Urodela)*

b Factors controlling the segregation of the optic vesicle into pigmented retinal epithelium and sensory retina. *Taricha torosa (Urodela)*

c Characterization of the endodermal substance that induces heart development. *Taricha torosa (Urodela)*

JACOBSON, D. C.O. Fil.Dr. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden

a Determination of the central nervous system. *Ambystoma* spec. *(Urodela)*

b Experimental studies on fiber pattern formation in the medulla oblongata. *Ambystoma* spec. *(Urodela)*

c The mechanism of neurulation. *Ambystoma* spec. *(Urodela)*

d Cytoplasmic control of DNA synthesis in neurons. *Mus musculus (Rodentia)*

JACOBSON, M. Ph.D. — Dept. of Biophys., The Johns Hopkins Univ., BALTIMORE, Md. 21218, U.S.A.

JACOBSSON, A. Fil.mag. — Zool. Inst., Univ. of Gothenburg, 4de Långgatan 7B, GÖTEBORG SV, Sweden

JACQUES, Miss, S. Y. B.A. — Dept. of Zool., Coll. of Sci., Univ. of Western Ontario, LONDON, Ont., Canada

a Biological effects of the "chemosterilant": Hempa (hexamethylphosphoric triamide) on embryonic cells and fibroblasts in culture. *(Teleostei), Mus musculus (Rodentia)*

JACQUOT, R. L. D.Sc., Prof. — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France

a Pre- and postnatal changes in glucose and glycogen metabolism of the liver cell; eventually assays on isolated cultured hepatocytes; electron microscopic studies. *Rattus norvegicus (Rodentia)* (in collaboration with Mrs. C. PLAS)

b Hemopoietic function of the foetal liver; factors controlling its progressive disappearance. *Rattus norvegicus (Rodentia)* (in collaboration with J. NAGEL)

c Endocrine function of the foetal pancreas; insulin blood levels in the foetus and in the mother. *Rattus norvegicus (Rodentia)* in collaboration with J. M. FELIX, B. C. J. SUTTER and Mrs. M. T. SUTTER (DUB))

JAFFE, L. F. Ph.D., Prof. — Dept. of Biol. Sci., Purdue Univ., LAFAYETTE, Ind. 47907, U.S.A.

JÄGERSTEN, K. G. M. Fil.Dr., Prof. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden

a Larval development. *(Pogonophora)*

b Comparative study of larval development. *(Invertebrata)*

JALOUZOT, R. — Lab. de Biol. Gén., Fac. des Sci., B.P. 347, 51 REIMS, France

JAMES, B. L. Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park., SWANSEA, Glamorganshire, Wales, U.K.

JAMES, D. A. D.Phil. — Dept. of Biol., Univ. of Saskatchewan, SASKATOON, Sask., Canada

a Immunological aspects of pregnancy. *Mus* spec. *(Rodentia)*

b Physiology of invasive tissues: trophoblast and tumour. *Mus spec. (Rodentia)*

JAMES, D. W. B.S. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England

a In vitro studies of the central nervous system. *Gallus domesticus (Aves)*

JANDIERI, Miss K. M. — Dept. of Biophysics, Inst. of Exper. Morphol., Acad. of Sci. of the Georgian S.S.R., 51 St. Kamo, TBILISSI 2, U.S.S.R.

a Participation of nuclear and cytoplasmic factors in regulation of DNA synthesis studied in isolated nuclei. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

JANS, D. E. Drs. — Muscular Dystrophy Res. Labs., Newcastle Gen. Hospt., NEWCASTLE upon Tyne NE4 6BE, England

a The quantitative measurement of RNA in normally differentiating myoblasts growing in tissue culture, and in comparable myoblasts cultured from dystrophic muscle. *Gallus domesticus (Aves), Mus musculus (Rodentia), Homo sapiens (Primates)* (in collaboration with K. F. A. ROSS)

b Measurement of the uptake by myoblasts of RNA fractions added to tissue culture media. *Gallus domesticus (Aves), Mus musculus (Rodentia), Homo sapiens (Primates)* (in collaboration with K. F. A. ROSS)

JANSEN, J. M.D., Prof. (Emer.) — Anat. Inst., Univ. of Oslo, Karl Johansgt. 47, OSLO, Norway

JANSSENS, P. A. Ph.D. — Dept. of Zool., School of Gen. Studies, Australian Nat. Univ., P.O. Box 4, CANBERRA, A.C.T. 2600, Australia

a Development of enzyme systems specially those concerned in nitrogen metabolism. *Xenopus laevis (Anura)*

JAYLET, A. Lic.ès Sci. — Lab. de Biol. Génér., Fac. des Sci., 118 Route de Narbonne, 31 TOULOUSE (04), France

a Effets des rayons X sur la descendance d'animaux irradiés; étude des anomalies chromosomiques. *Pleurodeles waltlii (Urodela)*

b Etude d'un facteur récessif semi-létal, ac. *Pleurodeles waltlii (Urodela)* (en collaboration avec J. C. BEETSCHEN)

JELÍNEK, R. MUDr., CSc. — Dept. of Histol., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a Quantitative changes of tissue, cellular and subcellular structure in normal and pathological ontogenesis of the central nervous system. *(Vertebrata)*
b Secondary development of axial structures (origin of neural tube and somites from the tail bud, localization of proliferation centers). *Gallus domesticus (Aves)*
c Elaboration of an appropriate method for testing the teratogenic activity of drugs. *Gallus domesticus (Aves), Mus norvegicus albus (Rodentia)*
JIRÁSEK, J. E. CSc. — Embryol. Lab., Inst. for the Care of Mother and Child, nábř. K. Marxe 157, PRAHA-Podoli, Czechoslovakia
JIRSOVÁ, Miss Z. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a Egg transplantation (electron microscopic and cytochemical studies of egg transport and implantation in experimental conditions). *(Mammalia)*
b Electron microscopy and cytochemistry of tubal epithelium. *(Rodentia; Carnivora), Homo sapiens (Primates)*
JIT, I. Ph.D., Prof. — Dept. of Anat., Med. Coll., ROHTAK, India
a Development of the splanchnic nerves. *Homo sapiens (Primates)*
b Development of striated muscle of oesophagus. *Homo sapiens (Primates)*
c Ages of ossification of various bones in embryos and adults. *Homo sapiens (Primates)*
d Structure and development of anal sphincters. *Homo sapiens (Primates)*
JOHANSSON, K. B. G. Fil.lic. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden
a Regulation of enzyme synthesis in cells in tissue culture.
JOHN, H. — Inst. of Anim. Genet., King's Bldgs, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K.
JOHNEN, Miss A. G. Dr.phil., Doz. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
a Die Wirkungsspezifität abnormer Induktoren in der Entwicklung. *(Amphibia)*
b Die Bedeutung des Zeitfaktors beim Induktionsvorgang. *Ambystoma* spec., *Triturus* spec. *(Urodela)*
c Untersuchungen über die Kompetenzverhältnisse beim Ektoderm. *(Urodela)*
JOHNSON, D. R. Ph.D. — Dept. of Anim. Genet., Univ. Coll. London, Wolfson House, 4 Stephenson Way, LONDON N.W.1. England
a Studies of the relationship of the developing embryo to its surrounding fluids, and the way the relationship changes when the embryo is carrying mutant genes. *Mus musculus (Rodentia)*
b Electron microscopy of abnormal tissues from animals carrying mutant genes. *Mus musculus (Rodentia)*
JOHNSON, E. M. Ph.D., Prof. — Dept. of Anat. Sci., Coll. of Med., Univ. of Florida, GAINESVILLE, Fla. 32601, U.S.A.
a The ontogeny of isoenzymes and the influence of teratogenic agents thereon; mechanisms of teratogenesis. *(Aves)*
JONES (HOLT), Mrs. E. C. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a The effect of maternal age on morphology and development of fertilized eggs. *Mus musculus (Rodentia)*
JONES, G. E. B.Sc. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a Effect of dielectric constant on the adhesion of embryonic cells. *Gallus gallus (Aves)*
JONES, K. W. Ph.D. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K.
a Small aggregate cultures of embryonic cells. *Rana pipiens (Anura)*
b Ultrastructural effects of actinomycin D on cultured embryonic cells. *Rana pipiens (Anura)*
c Molecular "hybridization" studies on cells cultured in vitro (extending current techniques of RNA/DNA annealing down to the cellular and tissue level). *Rana pipiens (Anura)* (in collaboration with H. JOHN)
d Studies on the behaviour and differentiation of normal and dystrophic myogenic cells in vitro and in vivo. *Mus musculus (Rodentia)*
JONES, O. P. Ph.D., M.D., Prof. — Dept. of Anat., State Univ. of New York at Buffalo, 318 Capen Hall, BUFFALO, N.Y. 14214, U.S.A.
a Embryonic blood cells in the yolk sac. *Rattus* spec. *(Rodentia)*
b Electron microscopy of hepatic hematopoiesis. *Rattus* spec. *(Rodentia), Homo sapiens (Primates)*
JONES, R. F. Ph.D. — Dept. of Biol. Sci., State Univ. of New York at Stony Brook, STONY BROOK, N.Y. 11790, U.S.A.
a Physiology and biochemistry of development and differentiation during vegetative growth, asexual reproduction and gametogenesis. *Chlamydomonas reinhardtii (Volvocales, Chlorophyceae)*
b Control of vegetative and reproductive development. *Marchantia polymorpha (Hepaticae)*

JONES, R. W. Ph.D., Prof. — Dept. of Zool., Oklahoma State Univ., STILLWATER, Okla. 74074, U.S.A.
a Relationships between rates of cell division in cleavage and rates of embryonic development. *Brachydanio rerio, Notropis girardi, Hybognathus placitus, Hybopsis aestivalis (Teleostei)*

JONES, W. E. Ph.D. — Marine Sci. Labs., Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales, U.K.

JONGH, H. J. de D.Sc. — Dept. of Anat. and Embryol., Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands
a Functional morphology of the head with special reference to larval life and metamorphosis. *(Anura)*
b Allometric growth of the eye. *Rana pipiens (Anura)*
c Development of the dentition. *(Blenniidae, Teleostei)*

JONGKIND, J. F. Ph.D. — Netherlands Central Inst. for Brain Research, IJdijk 28, AMSTERDAM, Netherlands
a Energy utilization in cerebral hemispheres during embryonic development, using the techniques of Lowry c.s. *Gallus domesticus (Aves)*

JONSSON, B. G. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden
a The effect of various drugs (a.o. thalidomide) on embryonic development. *Ambystoma* spec. *(Urodela), Rattus spec. (Rodentia), Oryctolagus* spec. *(Lagomorpha)*

JOSHI, Mrs. M. M. M.S. — Dept. of Anat., Med. Coll., NAGPUR-3, M.S., India
a Differentiation of the anterior horn cells of the spinal cord. *Gallus domesticus (Aves)*
b The influence of the peripheral field on the morphogenesis of the anterior horn cells. *Gallus domesticus (Aves)*

JOST, A. D. D.Sc., M.D., Prof. — Lab. de Physiol. Comp., Fac. des Sci., Univ. de Paris, 9 quai St. Bernard, 75 PARIS Ve, France

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JUBERTHIE (JUPEAU), Mrs. L. — Lab. Souterrain du C.N.R.S., 09 MOULIS (Ariège), France

JUDINA, Mrs. L. M. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.
a Embryonic development. *Bunodactis stella (Zoantharia, Actinozoa)*

JUNG, E. Dr.rer.nat. — Zool. Inst. der Univ., Röntgenring 10, 87 WÜRZBURG, W.Germany
a Further experiments to determine the ooplasmic reaction system. *Bruchidius (= Acanthoscelides) obtectus (Bruchidae, Coleoptera)*

JURA, Cz. D.Sc. — Zool. Dept., Jagiellonian Univ., ul.Krupnicza 50, KRAKÓW, Poland
a Early developmental stages. *Tetrodontophora bielanensis (Collembola)*
b Role of egg cortex in embryogenesis (studies with UV micro-beam). *Succinea putris (Gastropoda)*

JURAND, A. Ph.D., — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K.
a Further observations on the mesoblast of developing limb buds. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Early changes in developing embryos after hydrocortisone treatment. *Gallus domesticus*
c Developmental changes in the notochord. *Mus musculus (Rodentia)*
d Studies on the formation of various cell organelles during the fission cycle. *Paramecium aurelia (Ciliata)*

JURGENS, J. D. M.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, S.Africa
a The nasal capsule and its bearing on the phylogeny. *(Amphibia)*

JUSTUS, J. T. Ph.D. — Springville Labs., Roswell Park Mem. Inst., SPRINGVILLE, N.Y. 14141, U.S.A.

JUSZCZYK, W. Dr. — Dept. of Zool., Wyzsza Szkoła Pedagogiczna, ul. Podbrzezie 3, KRAKÓW, Poland
a Influence of starvation on larval development. *Rana temporaria, Bufo bufo (Anura), Triturus vulgaris, T. cristatus (Urodela)*

KACZANOWSKA (DOBRZAŃSKA), Mrs. J. Dr.ès Sci. — Inst. of Zool., Warsaw Univ., Krak. Przedmieście 26/28, WARSZAWA 64, Poland
a Morphogenesis of division and regeneration: 1. the topography of cortical organelles (oral apparatus, contractile vacuole pores, cytoproct, kinetome) 2. site determinations and morphogenetic movements during morphogenesis in normal and experimental set of conditions. *Chilodonella cucullulus (Ciliata)*

KACZANOWSKI, A. Dr.ès.sci. — Inst. of Zool., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSAWA 64, Poland
a Morphology and hypothesis of growth of trophonts. *Opalina ranarum. (Opalina, Zoomastigina)*
1. Growth as a function of synthesis of microtubular fibrils
2. Growth abnormalities

b Experiments on life cycle and development. *Opalina ranarum (Opalina, Zoomastigina)*, host: *Rana temporaria (Anura)*
1. In tadpoles under normal and abnormal conditions of temperature and nutrition
2. Cell differentiation and polyploidy

KADASNE, D. K. M.S., F.R.C.S. — Dept. of Anat., Med. Coll., NAGPUR-3, M.S., India
a Differentiation of spinal ganglia in vitro and in vivo. *Gallus domesticus (Aves)*

KAHN, A. J. Ph.D., Prof. — Dept. of Zool., Syracuse Univ., 130 College Place, SYRACUSE, N.Y. 13210, U.S.A.
a Mechanisms in the control of morphogenesis and differentiation. *Dictyostelium* spec., *Polyspondylium* spec., *Protostelium* spec. *(Acrasiales), Naegleria grüberi (Amoebina)*
b Mechanisms in the control of cell movement in amoeboid microorganisms. *Dictyostelium* spec., *Polyspondylium* spec., *Protostelium* spec. *(Acrasiales)*

KAIGHN, M. E. Ph.D. — New York Blood Center, 310 E. 67th St., NEW YORK, N.Y. 10021, U.S.A.
a Developmental changes in plasma protein synthesis in clonally-derived liver cells in vitro as revealed by radioimmunochemical techniques. *Rattus rattus (Rodentia), Homo sapiens (Primates)*

KAITILA, I. — Lab. of Exper. Embryol., III Dept. of Pathol., Univ. of Helsinki, Haartmaninkatu 3, HELSINKI 25, Finland
a Drug-induced teratogenesis in vitro. *Mus musculus (Rodentia)* (in collaboration with L. O. SAXÉN and A. LATHI)

KAJI, S. D.Sc., Prof. — Dept. of Biol., Fac. of Sci., Konân Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan
a Tissue differentiation of the eye disc in the Bar mutant. *Drosophila melanogaster (Diptera)*

KAJII, T. M.D. — WHO Reference Center, Clin. Univ. de Gynécol. et d'Obstét., 20 rue Alcide Jentzer, 1211 GENÈVE 4, Switzerland
a Congenital malformations and cytogenetics. *Homo sapiens (Primates)*
b Cytogenetics of aborted fetuses. *Homo sapiens (Primates)*

KAJISHIMA, T. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

KAJITA, A. M.D. — Dept. of Biochem., Nippon Med. School, 1-1-5, Sendagi, Bunkyo-ku, TOKYO, Japan
a Genetic control of hemoglobin switch during metamorphosis. *Rana catesbeiana (Anura)* (in collaboration with K. HAMADA and R. SHUKUYA)
b Change of isozyme patterns during metamorphosis. *Rana catesbeiana (Anura)* (in collaboration with R. SHUKUYA)

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KÄLLÉN, A. J. B. M.D., Prof. — Tornblad-Inst. for Comp. Embryol., Biskopsgatan 7, LUND, Sweden
a Overgrowth phenomenon of the brain. *Gallus domesticus (Aves)*
b Epidemiologic studies on teratology. *Homo sapiens (Primates)*

KÁLMÁN, G. Ph.M. — Dept. of Anat., Univ. Med. School, Kossuth Lajos sug.-út 40, SZEGED, Hungary
a Development of the adrenergic inhibitory terminals in autonomic ganglia; fluorescence microscopy and electron microscopy. *Mus rattus (Rodentia)* (in collaboration with B. CSILLIK and Miss E. KNYIHÁR)

KALTENBACH, Mrs. J. COUFFER Ph.D., Prof. — Dept. of Biol. Sci., Clapp Lab., Mount Holyoke Coll., SOUTH HADLEY, Mass. 01075, U.S.A.
a Local action of thyroxine on metamorphosis: histological and histochemical studies. *Rana pipiens (Anura)*

KALTER, H. Ph.D., Prof. — Children's Hosp. Res. Found., Div. of Teratol., Elland and Bethesda Aves., CINCINNATI, Ohio 45229, U.S.A.

KALTHOFF, K. — Biol. Inst. I (Zool.) der Univ., Katharinenstr. 20, 78 FREIBURG, W.Germany
a Embryonic determination. *Smittia* spec. *(Chironomidae, Diptera)*

KALUZA, J. S. M.D. — Dept. of Neuropathol., Polish Acad. of Sci., ul. Botaniczna 3, KRAKÓW, Poland

KAMAR, G. A. R. Ph.D., Prof. — Anim. Prod. Dept., Fac. of Agric., Cairo Univ., GIZA, Egypt, U.A.R.
a Factors influencing reproduction and production as far as the endocrines and gonads are concerned. *(Aves)*
b Growth and factors affecting especially the endocrines. *(Aves)*
c Factors influencing production and reproduction as far as the environmental conditions are concerned. *(Aves)*

KAMAT, D. N. Ph.D. — Dept. of Zool., Shivaji Univ., Vidyanagar, KOLHAPUR-4, M.S., India
a A histochemical (qualitative and quantitative) study of phospholipids and phosphatases in the larval stages. *Chrysomia rufifacies (Diptera)* (in collaboration with P. S. CHITNIS, Poona)

KAMEL, A. Ph.D., Prof. — Dept. of Zool., Fac. of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt, U.A.R.

KAMEYAMA, Y. M.D., D.Med.Sc. — The Research Inst. of Environm. Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, 464 Japan

a Effects of ionizing radiations upon embryos of different species. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI, K. HOSHINO and Miss T. NAKAYAMA)

b Effects of reduced atmospheric pressures upon the embryo. *Mus musculus (Rodentia)*

c Effects of some chemical substances upon the embryo. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with K. HOSHINO)

d Mechanism responsible for malformations of the extremity in the embryo. *Mus musculus, Rattus norvegicus (Rodentia)*

e Comparative study of the proceeding of development in different strains and species of laboratory animals. *Mus musculus, Rattus norvegicus (Rodentia)*

KANATANI, H. D.Sc., Prof. — Lab. of Physiol., Ocean Research Inst., Univ. of Tokyo, Minamidai 1-15, Nakano-ku, TOKYO, (164) Japan

a Mechanism of spawning. *Asterias amurensis, Asterina pectinifera (Asteroidea)*

b Mode of action of 1-methyladenine on oocyte maturation. *(Asteroidea)*

KANAZIR, D. T. M.D., Ph.D., Prof. — Inst. of Nucl. Sci. "Boris Kidrich", BEOGRAD, Yugoslavia

KANE, R. E. Ph.D., Prof. — Pacific Biomed. Research Center, Univ. of Hawaii, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.

a Role of cortical granules in formation of hyaline and fertilization membrane. *(Echinodermata)*

b Mechanism of cell division, studied by means of the isolated mitotic apparatus. *(Echinodermata)*

KANJI, S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India

KANKAVA, Mrs. B. Z. Cand.biol.sci. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

KANKI, T. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO, 158, Japan

a Synthesis of RNA during early development. *Anthocidaris* spec., *Pseudocentrotus* spec., *Hemicentrotus* spec. *(Echinoidea)*

KANOH, Y. D.Sc., Prof. — Akkeshi Marine Biol. Station, Hokkaido Univ., AKKESHI, Hokkaido, Japan

a Electronmicroscope observation of spermatozoa and fertilization process. *(Mollusca; Teleostei)*

KANTOROVA, Mrs. W. I. Cand.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R, Vavilov St 26, MOSCOW B-133, U.S.S.R.

a Regeneration of cranium bones. *Canis familiaris (Carnivora)*

KAPLAN, N. O. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.

a Action of pyridine nucleotides in development and differentiation

KAPLAN, S. Ph.D. — Dept. of Anat. Sci., Coll. of Med., Univ. of Florida, GAINESVILLE, Fla. 32601, U.S.A.

a Investigations into the mechanisms underlying congenital malformations; bio-energetics of development and the influence of teratogens thereon. *Gallus domesticus (Aves)*

KARASAKI, S. Ph.D. — Research Labs., Montreal Canc. Inst., Notre-Dame Hosp., 1560 Sherbrooke E., MONTREAL 24, Que., Canada

a Studies on yolk platelets. *Xenopus laevis (Anura)*

KARASAKI, Sh. — Depts. of Microbiol. and Biochem., Med. Center, Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.

a Analysis of the physico-chemical properties of DNA in differentiating cells. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus musculus, Rattus rattus (Rodentia), Homo sapiens (Primates)* (in collaboration with S. P. MODAK)

KARB, B. Dr.rer.nat. — Inst. für Landwirtsch. Zool. und Bienenk. der Univ., Melbweg 5, 53 BONN, W.Germany

a Vitamin D-Mangelerscheinungen bei embryonen. *Gallus gallus (Aves)*

KARLIN, Miss D. B.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

a The ultrastructural changes which occur in blastoderm cells as they differentiate into either epi- or hypoblastic cells. *Gallus domesticus (Aves)*

KARLSSON, B. Fil.Dr. — Zoophysiol. Inst., Univ. of Lund, Helgonavägen 3, 223 62 LUND, Sweden

a Biochemical and immunological studies of stage specific proteins and enzymes of the developing embryo. *Sus* spec. *(Artiodactyla)*

KÁSA, P. M.D. — Dept. of Anat., Univ. Med. School, Kossuth Lajos sug.-út 40, SZEGED, Hungary

a Developmental histochemistry of the archicerebellar cortex. *Mus rattus (Rodentia)* (in collaboration with B. CSILLIK)

KASPI (VISHNIVETSKI), Mrs. Th. M.S. — Dept. of Embryol. and Teratol., Tel-Hashomer Hosp., Tel-Aviv Univ. Med. School, TEL-AVIV, Israel

a Behaviour and vital properties of syncytial placenta cells in vitro at term. *Homo sapiens (Primates)* (in collaboration with L. A. NEBEL)

KASSNER, J. D.Sc. — Zaklad Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul. Sienkiewicza 21, WROCŁAW, Poland

KASYANOV, V. L. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

a Electrical properties of eggs during maturation and development. *Rana temporaria* and other spp. *(Amphibia)*

b Effect of centrifugation on egg development. *Rana temporaria* and other spp. *(Amphibia)*

KATAGIRI, Ch. D.Sc. — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 10 West 8, SAPPORO, (060) Japan

a Fertilization and cleavage. *Rana* spec., *Bufo* spec. *(Anura)*

b Characterization and development of hatching enzyme. *Rana* spec., *Bufo* spec. *(Anura)*

KATAKURA, Y. D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan

a Development of the sex characters. *Armadillidium vulgare (Isopoda, Crustacea)*

KATASHIMA, R. D.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan

a Breeding system. *Euplotes* spec. *(Ciliata)*

KATO, K.-I. Ph.D. — Biol. Lab., Doshisha Univ., Kamikyo-ku, Karasuma Imadegawa, KYOTO, Japan

a Histochemistry of proteins in salivary gland chromosomes in relation to cyto-differentiation and gene activation. *Chironomus dorsalis (Diptera)*

b Histones in developing embryonic tissues. *Triturus pyrrhogaster, Xenopus laevis, (Amphibia)*

KATO, M. B.S. — Dept. of Anat., Fac. of Med., Tokyo Med. and Dental Univ., 1-5-47, Yushima, Bunkyo-ku, TOKYO, 113 Japan

a Experimental studies on lens regeneration. *Triturus pyrrhogaster, Hynobius nebulosus (Urodela)*

b Tissue culture studies on the development of the mammary gland. *Rattus norvegicus, Homo sapiens (Mammalia)*

c Collagenogenesis. *Rana japonica, Bufo vulgaris, Hynobius nebulosus (Anura), Triturus pyrrhogaster (Urodela)*

KATOH, A. K. Ph.D. — Dept. of Radiotherapy, Cancer Research Lab., Mercy Hospital, 1400 Locust St., PITTSBURGH, Pa. 15219, U.S.A.

a Differentiation of the embryonic lens in vitro. *Gallus domesticus (Aves)*

KAUFFMAN, Miss S. M.D., Prof. — Dept. of Pathol., Downstate Med. Center, State Univ. of New York, 450 Clarkson Ave., NEW YORK, Brooklyn, N.Y. 11203, U.S.A.

a The effects of urethane on embryogenesis of neural tube cells and lung cells. *Mus musculus (Rodentia)*

KAUFMANN, B. P. Ph.D., Prof. (Emer.) — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

a Changing patterns of chromosome fine structure and function during development. *Drosophila melanogaster* and interspecific hybrids *(Drosophilidae, Diptera)*

KAWAKAMI, I. D.Sc., Prof. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812 Japan

a Disintegration of cells in differentiating tissues. *(Amphibia)*

b Lens fiber differentiation from lens epithel in vitro. *Gallus domesticus (Aves)*

c Metabolic changes in nucleic acids and proteins in the primary induction. *Triturus pyrrhogaster, T. ensicouda (Urodela)*

KAWAMURA, T. D.Sc., Prof. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan

a Hybridization between European and Japanese forms. *(Ranidae, Anura)*

b Synthesis of amphidiploids. *(Ranidae, Anura)*

c Synthesis of nycleo-cytoplasmic hybrids between different species. *(Ranidae, Anura)*

KAYE, H. Ph.D. — Dept. of Radiobiol., Med. School, Yale Univ., NEW HAVEN, Conn., U.S.A.

KEATING, M. J. B.Sc., M.B. — Dept. of Physiol., Med. School, Univ. of Edinburgh, Teviot Place, EDINBURGH 8, Scotland, U.K.

a Development of visual connections. *Rana temporaria, Xenopus laevis (Anura)*

KELLAND, J. L. Ph.D. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada

KELLAS, L. Ph.D. — Histol. Dept., Fac. of Med., Univ. of Liverpool, LIVERPOOL, Lancashire, England

KELLEY, R. O. Ph.D. — Dept. of Anat., School of Med., Univ. of New Mexico, ALBUQUERQUE, New Mexico 87106, U.S.A.

a Electron microscopy of induction systems. *Xenopus laevis (Anura)*

KELLY, W. A. B.Sc. — Dept. of Anat., Med. School, Univ. Walk, BRISTOL 8, England

KELSO, A. F. Ph.D. — Dept. of Physiol. and Pharmacol., Chicago Coll. of Osteopathy, 1122 E. 53rd St., CHICAGO, Ill. 60615, U.S.A.

a Investigation of oxygen toxicity on development of blood islands and cardiovascular system. *Gallus domesticus (Aves)*

KEMP, N. E. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

a Electron microscopic analysis of metamorphic changes in the skeleton. *Rana pipiens (Anura)*

b Fine structure of fin rays in regenerating tailfins. *Tilapia mossambica, Carassius auratus (Teleostei)*

KEPHART, Miss J. E. M.S. — Cell Research Inst., B.L. 220, The Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.

a The progressive development and interactions of cellular organelles with differentiation of tissues, together with the modification of this development by various experimental procedures. *Zea mays (Gramineae)*

KEREKES, M. Chem.D. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str.Gh.Marinescu 38, TÎRGU-MUREŞ, Rumania

KERNIS, M. M. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, P.O. Box 6998, CHICAGO, Ill. 60680, U.S.A.

a Morphological and physiological effects of teratogens with particular emphasis on the effects of these agents on placental function (techniques: in vitro and in vivo uptake of isotopes by embryos, autoradiography, electron microscopy, histochemistry, and measurements of electrical potential differences). *Rattus norvegicus (Rodentia)*

KERR, Miss M. S. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Biochemical studies of lipovitellins in oocytes and hemolymph. *Callinectes sapidus (Decapoda, (Crustacea)*

b Studies on maturation of hemocytes and their biosynthetic capacities. *(Decapoda, Crustacea)*

c Studies on functions of satellite DNA's and macromolecular metabolism in regenerating tissue. *Gecarcinus lateralis (Decapoda, Crustacea)* (in collaboration with D. M. SKINNER and D. E. GRAHAM)

KERR, N. S. Ph.D., Prof. — Dept. of Zool., Coll. of Biol. Sci., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

a The morphogenesis of non-flagellated amoeba to flagellated amoeba, of amoeba to plasmodia, and of plasmodia to fruiting bodies. *Didymium nigripes (Eumycetozoina)*

b Developmental genetics. *Didymium nigripes (Eumycetozoina)*

KERR, W. E. Ph.D., Prof. — Dept. de Genét., Fac. de Med. de Ribeirão Prêto, Univ. de Sao Paulo, C.P. 301, RIBEIRÃO PRÊTO, S.P., Brazil

KERSE, (BÜYÜKÖZER), Mrs. I. Dr., Prof. — Inst. of Histol. and Embryol., Hacettepe Sci. Center, Med. Fac., ANKARA, Turkey

a Ultrastructure of fetal membranes. *Homo sapiens (Primates)*

KESSEL, R. G. Ph.D.,, Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a Analysis of variations in cell structure and function, especially developmental phenomena (gametogenesis) in a variety of organisms, utilizing techniques of electron microscopy, cytochemistry, radioautography, chromatography, electrophoresis, ultracentrifugation and hydrostatic pressure.

KETCHEL, M. M. Ph.D., Prof. — Dept. of Physiol., School of Med., Tufts Univ., 136 Harrison Ave., BOSTON, Mass. 02111, U.S.A.

KEYSER, A. J. M. Med.drs. — Dept. of Anat. and Embryol., Univ. of Nijmegen, Geert Grooteplein noord 21, NIJMEGEN, Netherlands

a An autoradiographic study of the development of the diencephalon and some basal telencephalic areas (limbic system, rhinencephalon). *Cricetulus barabensis griseus (Rodentia)*

KHALIL, S. H. M.Sc. — Dept. of Zool., Fac. of Sci., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt, U.A.R.

a The development of the urogenital system. *Bufo regularis (Anura)* (in collaboration with M. I. MICHAEL and S. N. SEDRA)

KHAN, M. S. M.Sc. — Dept. of Zool., Talim-Ul-Islam Coll., RABWAH, Distr. Jhangh, W.Pakistan

a Morphogenesis of digestive tract. *Bufo melanostictus (Anura)*

b Development of nervous system. *Bufo melanostictus (Anura)*

c Gastrulation and neurulation. *Bufo melanostictus (Anura)*

d Development of skin. *Bufo melanostictus (Anura)*

KHARE, M. K. D.Phil. — Dept. of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India

a Studies on the structure and development of different organs. *Philosamia ricini (Lepidoptera)*

b Studies on the effect of light, temperature and humidity on development and metamorphosis. *Philosamia ricini (Lepidoptera)*

KHARLOVA, Mrs. G. V. Cand. biol. sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

KIDO, T. D.Sc., Prof. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan

a Analysis of mechanism of pharynx-formation. *Dugesia japonica (Turbellaria)*
b Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*
c Cytological properties of neoblasts. *Dugesia japonica (Turbellaria)*
d Cytological properties of interstitial cells. *Hydra vulgaris (Hydroidea)*

KIEFER, B. I. Ph.D. — Dept. of Biol., Wesleyan Univ., MIDDLETOWN, Conn. 06457, U.S.A.

a Genetic control of differentiation and development of male germ cells (electron microscopy, electrophoresis, autoradiography, density gradient centrifugation). *Drosophila melanogaster (Diptera)*
b Structure and function of the mitotic apparatus as compared to other motile systems (electron microscopy, density gradient centrifugation). *Strongylocentrotus purpuratus (Echinoidea)*
c Regulation of ribosomal RNA and ribosomal protein synthesis during development (density gradient centrifugation, electrophoresis, autoradiography). *Drosophila melanogaster (Diptera)*

KIEŁBOWNA, Miss L. D.Sc. — Zaklad Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul.Sienkiewicza 21, WROCŁAW, Poland

a Studies on myogenesis. *(Amphibia)*

KIENY, Mrs. M. A. SENGEL Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38-GRENOBLE, France

a Ectoderm-mesoderm interaction in the primary induction of the limb bud, in the orientation of the limb bud and in its specific morphogenesis. *Gallus domesticus, Anas boschas (Aves)*
b Regulative mechanisms (competition) in the differentiation of the limb bud skeleton as studied by autoradiographic methods. *Gallus domesticus (Aves)*
c Regional determination of pterylae and apteria. *Gallus domesticus (Aves)*

KIERMAYER, O. Dr.phil. — Inst. für Entw. physiol., Univ. zu Köln, Gyrhofstr. 17, 5 KÖLN-Lindenthal, W.Germany

a Experimental studies on the developmental pattern. *Micrasterias denticulata (Desmidiaceae)*
b Comparative studies on the morphogenetic reaction of different varieties, treated with growth regulating substances. *Lycopersicon esculentum (Solanaceae)*
c Electron microscopic studies on the problem of cytomorphogenesis. *Micrasterias denticulata (Desmidiaceae)*

KILARSKI, W. Ph.D. — Dept. of Comp. Anat., Jagellonian Univ., ul.Krupnicza 50, KRAKÓW, Poland

a Ultrastructure of yolk. *(Holostei)*

KILLIE, J. W. M.Sc. — Dept. of Obstet. and Gynecol., Div. of Reprod. Biol., Univ. of Virginia Med. School, Box 179, CHARLOTTESVILLE, Va. 22903, U.S.A.

a Necessity, function, biochemical characteristics and composition of the mucin coat in the preimplanted embryo. *Oryctolagus cuniculus (Lagomorpha)*

KIMMEL, D. L. Ph.D., Prof. — Dept of Anat., Med. Center, West Virginia Univ., MORGANTOWN, W.Va. 26506, U.S.A.

a Development of the nerve supply to the pharynx, the kidney and the carotid body. *Oryctolagus cuniculus (Lagomorpha), Homo sapiens (Primates)*

KIMMEL, D. L., Jr. M.D., Ph.D. — Div. of Biol. and Med. Sci., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.

a Examination of time and tissue specificity of tryptophan oxygenase and formylase appearance during larval development. *Drosophila melanogaster (Diptera)*
b Examination of factors regulating kynurenine deposition in larval fatbody granules. *Drosophila melanogaster (Diptera)*

KIMURA, I. M.Sc. — Dept. of Biophys. and Biochem., Fac. of Sci., Univ. of Tokyo, 7-3-1 Hongo, Bunkyo-ku, TOKYO 113, Japan

a Post-fertilization activation of an enzyme which catalyzes thiol-disulfide exchange in eggs. *Anthocidaris crassispina, Pseudocentrotus depressus, Hemicentrotus pulcherrimus (Echinoidea)*
b Comparative studies of microtubule proteins, immunologically and as substrates for the thiol-disulfide exchange reaction. *Anthocidaris crassispina, Pseudocentrotus depressus, Hemicentrotus pulcherrimus (Echinoidea)*

KINČURASHVILI, Mrs. N. I. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

KINDAHL, Miss M. E. Ph.D. — Skeppargatan 51 III, 11458 STOCKHOLM, Sweden

a The development of the teeth. *(Insectivora)*

KING, Mrs. D. WEI Ph.D., Prof. — Dept. of Zool., Natl. Taiwan Univ., TAIPEI, Formosa

KING, P. E. Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales, U.K.

KING, T. J. Ph.D., Prof. — Dept. of Biol., Georgetown Univ., 37th & O.St. N.W., WASHINGTON, D.C. 20007, U.S.A.

a Studies on nuclear differentiation in embryos. *Rana pipiens (Anura)*

b Chromosome replication in nuclear transplant embryos. *(Amphibia)*

KINOSHITA, S. Ph.D. — Zool. Inst., Univ. of Tokyo, Hongo 7-3, Bunkyo-ku, TOKYO, (113) Japan

a Mechanism of flagellar movement. *Hemicentrotus pulcherrimus (Echinoidea)*

b Mechanism of cleavage. *Clypeaster japonicus (Echinoidea)*

c Biochemical analysis of animal and vegetative gradients in the embryo. *Pseudocentrotus depressus (Echinoidea)*

KINSELLA, J. E. M.S. — Div. of Food Sci., Lipids Lab., Pennsylvania State Univ., UNIVERSITY PARK, Pa. 16802, U.S.A.

KIORTSIS, V. Dr.ès Sci., Prof. — Zool. Lab. and Museum, Fac. of Sci., Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece

KIRBY, D. R. S. † Ph.D. — Dept. of Zool., Univ. of Oxford, Parks Road, OXFORD OX1 3PF, England
(deceased)

KIRCHEN, R. V. M.Sc. — Dept. of Cytogenet. and Developm. Biol., Carolina Biol. Supply Co., BURLINGTON, N.C. 27215, U.S.A.

a Mitotic activity in early development. *Oryzias latipes (Teleostei)*

KIRK, D. L. Ph.D. — Dept. of Zool., Biol. Sci. Div., Univ. of Chicago, 1101 E. 57th St., CHICAGO, Ill. 60637, U.S.A.

KIRSTEN, W. H. Prof. — Dept. of Biol., Div. of Biol. Sci, Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Mechanism of malignant transformation by viruses

b Studies of growth control of normal malignant cells in vitro.

KISCHER, C. WARD Ph.D. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex. 77550, U.S.A.

a Biochemical characterization of nuclear histones from embryonic sources

b Biochemical ultrastructural studies on organogenesis

c Ultrastructural and biochemical analyses of development of skin derivatives. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

d Effects of prostaglandins on developing skin and skin derivatives. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

KISHIDA, Y. D.Sc. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan

a Depigmentation of eye after treatment with thiocarbamide and its derivatives. *Dugesia japonica (Turbellaria)*

b Mechanisms of eye formation during regeneration. *Dugesia japonica (Turbellaria)*

c Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*

d Ultrastructure of neoblast. *Dugesia japonica (Turbellaria)*

KISIMOTO, R. Dr.Agr. — Dept. of Plant Pathol. and Entomol., Kyushu Natl. Exper. Station, Nishi 496, Izumi, CHIKUGO-shi, Fukuoka-ken, 833 Japan

a Wing polymorphism. *Nilaparvata lugens, Laodelphax striatella, Sogata furcifera (Araeopidae, Homoptera)*

b Development of viruliferous and non-viruliferous forms of a plant virus vector. *Laodelphax striatella (Araeopidae, Homoptera)*

KISTLER, A. — Div. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, CH-3000 BERN, Switzerland

a Comparative biochemistry and ultrastructure of mitochondria in embryonic systems. (in collaboration with R. WEBER)

KLEIN, A. O. Ph.D., Prof. — Biol. Dept., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.

a Light regulated development. *Chlamydomonas* spec. *(Chlorophyceae), Phaseolus vulgaris (Papilionaceae)*

KLEIN, N. W. Ph.D., Prof. — Dept. of Anim. Genet., Storrs Agric. Exper. Station, Univ. of Connecticut, STORRS, Conn. 06268, U.S.A.

a Protein metabolism and its relationship to growth and differentiation in the explanted embryo. *Gallus* spec. *(Aves)*

b Mechanisms of teratogenic specificity in the explanted embryo. *Gallus* spec. *(Aves)*

c Growth regulation in the early embryo (culture of embryos on a growth limiting medium; synthesis and break-down of macromolecules in specific regions of the embryo). *Gallus* spec. *(Aves)*

KLEIN, R. L. Ph.D., Prof. — Dept. of Pharmacol., School of Med., Univ. of Mississippi, JACKSON, Miss. 39216, U.S.A.

KLEINEBRECHT, J. Dr.rer.nat. — Inst. für Humangenet. und vergl. Erbpathol. der Univ., Paul-Ehrlich-St. 41, 6 FRANKFURT/Main, W.Germany

a Histochemistry of mucopolysaccharides in organogenesis of the skeleton; genetically and fluoro-deoxy-cytidine induced malformations. *Mus musculus (Rodentia)*

b Normal and fluoro-deoxy-cytidine induced resorptions. *Mus musculus, Mesocricetus auratus (Rodentia)*

KLEISS, E. Dr.Med., Prof. — Cat. de Embriol., Fac. de Med., Univ. de Los Andes, MÉRIDA, Venezuela
— personal address: Apartado 38, MÉRIDA, Venezuela

KLÍMA, M. Dr. — Dept. of Morphol., Inst. of Vertebr. Zool., Czechoslov. Acad. of Sci., Květná, 8, BRNO, Czechoslovakia

a Morphogenesis of the sternum and shoulder girdle. *(Monotremata; Marsupialia)*

b Allometric growth of skeleton. *(Chiroptera)*

c Hair morphogenesis and growth. *(Chiroptera)*

KMIEĆ, B. M.B. — Dept. of Histol. and Embryol., Acad. of Med., ul.Narutowicza 60, ŁÓDŹ, Poland

a Comparative histochemical studies on the development of the adrenal medulla. *Xenopus laevis, Rana esculenta (Anura), Rattus norvegicus, Cavia cobaya (Rodentia), Homo sapiens (Primates)*

KNESE, K.-H. Dr.med., Dr.phil., Prof. — Inst. für Histol. und Embryol., Univ. Hohenheim (LH), Fruwirthstr. 16, 7000 STUTTGART-Hohenheim, Western Germany

a Histochemical, enzymological, and electronmicroscopical investigations of the early histogenesis of the connective and supporting tissue of the presumptive regions of different kinds of mesenchyme, especially of cartilage and bone, and those in lung and kidney. *Gallus domesticus (Aves), Bos bovinus (Artiodactyla), Rattus norvegicus, Mus musculus (Rodentia), Homo sapiens (Primates)*

b Morphological, enzymological and electronmicroscopical investigations of histogenesis especially of cartilage and bone as well as metamorphosis after hormone application. *Rattus norvegicus (Rodentia), Bos bovinus (Artiodactyla)*

c Developmental morphology of embryo. *Bos bovinus (Artiodactyla)*

KNIGHT-JONES, E. W. D.Phil., Prof. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales, U.K.

KNIZETOVA (VEJP), F. Ph.D. — Dept. of Zool., Fac. of Sci., Univ. of Alberta, EDMONTON, Alta., Canada

a Immunogenetic analysis of graft-versus-host reaction in embryos using the splenomegaly assay. *Gallus domesticus (Aves)*

b Development of lymphoid system; effect of irradiation on immunological processes. *Gallus domesticus (Aves)*

KNJAZEVA, Miss R. A. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

a Polyembryony (somatic embryogenesis). *Gallus domesticus, Anas platyrhynchos, Meleagris gallopavo (Aves)*

KNOWLES, Sir G. W. Ph.D., Prof. — Dept. of Anat., King's Coll., Univ. of London, Strand, LONDON, England

KNOX, W. E. M.D. — Dept. of Biol. Chem., Canc. Research Inst., New England Deaconess Hosp., 185 Pilgrim Rd., BOSTON, Mass. 02215, U.S.A.

a Biochemistry of development. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

KNUDSEN, P. A. M.D., D.D.S., Prof. — Dept. of Anat., Royal Dental Coll., AARHUS, Denmark

a Congenital malformations of jaws, oral cavity and nervous system induced by hypervitaminosis A and trypan blue. *Mus musculus, Rattus norvegicus (Rodentia)*

b Malformations of the vascular system of brain and head. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with J. BUGGE)

KNYIHÁR, Miss E. M.D. — Dept. of Anat., Univ. Med. School. Kossuth Lajos sug.-út 40, SZEGED, Hungary

a Development of the adrenergic inhibitory terminals in autonomic ganglia: fluorescence microscopy and electron microscopy. *Mus rattus (Rodentia)* (in collaboration with B. CSILLIK and G. KÁLMÁN)

b Developmental histochemistry and electron microscopy of the vegetative ground plexus. *Mus Rattus (Rodentia)* (in collaboration with B. CSILLIK)

KOBAYASHI, N. Ph.D. — Biol. Lab., Doshisha Univ., Kamikyo-ku, Karasuma Imadegawa, KYOTO, Japan

a Reproductive physiology, especially histochemistry of oogenesis. *(Echinoidea)*

KOBAYASI, H. Dr., Prof. — Biol. Lab., Japan Women's Univ., Mejirodai 2, 8, Bunkyo-ku, TOKYO, Japan

KOCH, P. Ph.D. — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, W. Germany

a Separation and characterization of yolk proteins. *Carausius morosus (Cheleutoptera), Acheta domesticus (Orthoptera)*

b Comparison of egg and haemolymph proteins. *(Insecta)*

KOCHAR, N. K. M.Sc. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL 3, England
a The effect of X-irradiation on spermatogenesis. *(Mammalia)*

KOCHAV, Sh. M.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
a The differentiation potencies of the blastoderm prior to laying. *Gallus domesticus (Aves)*

KOCHER-BECKER, Mrs. U. Dr.rer.nat. — Heiligenberg Inst., 7799 HEILIGENBERG, Baden, W.Germany •
a Determination of undetermined ectoderm in solutions of inducing substances. *Triturus alpestris (Urodela)*
b Effects and mechanisms of the mesodermal inducing factor. *Triturus alpestris, Ambystoma mexicanum (Urodela)*

KOCHER, W. Dr. phil. — Zool. Inst. der Univ. Würzburg, und Heiligenberg Inst., 7799 HEILIGENBERG, Baden, W.Germany •
a Patterns of effects of alkylating substances (especially of triethylenemelamine, TEM) and their treatment-phase specifity during early development and organogenesis. *Gallus domesticus (Aves)*
b Pattern formation in selection-lines of the polydactyly mutant. *Mus musculus (Rodentia)*
c Phenocopy of the gene effects of polydactyly by means of TEM-treatment. *Mus musculus (Rodentia)*
d Interactions between the gene polydactyla and the teratogenic effects of TEM. *Mus musculus (Rodentia)*

KOCHERT, G. Ph.D. — Dept. of Botany, Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.
a Sexual induction. *Volvox carteri (Chlorophyceae)*
b RNA metabolism in development. *Volvox carteri (Chlorophyceae)*

KOCHHAR, D. M. Ph.D. — Depts. of Anat. and Oral Biol., Coll. of Med. and Dent., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Teratogenic response of embryos to some specific amino acid analogues in vivo, and in whole embryo cultures. *Mus musculus (Rodentia)*
b Morphological and biochemical changes in limb buds of normal embryos and embryos in which phocomelia has been induced by experimental means. *Mus musculus (Rodentia)*

KOCHVA, E. Ph.D., Prof. — Dept. of Zool., Tel-Aviv Univ., 155 Herzl St., TEL-AVIV, Israel
a Development of glands; synthesis and transport of enzymes and other secretory products. *(Ophidia, Reptilia)*

KOČOVÁ (PECHÁČKOVÁ), Mrs. J. Dr.med. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia
a The development of the venous system. *(Amniota)*

KOECKE, H.-U. Ph.D., Prof. — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, W.Germany
a Determination von Neuralleistenzellen und Derivaten. *Anas domestica (Aves)*
b Entwicklungsphysiologie der Feder und embryonale Pterylose. *Anas* spec., *Columba* spec., *Gallus domesticus (Aves)*
c Neuralleistenentwicklung und Pigmentierung. *Anas* spec. *(Aves)*
d Identifizierung von Melanoblasten und Melaningenese. *Anas domesticus (Aves)*
e Anlage und Gefässversorgung der Epithelkörper (Parathyreoidea). *Salamandra maculosa (Urodela)*

KOHONEN, P. J. Ph.D. — Lab. of Exper. Embryol., Dept. of Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI 10, Finland
a Nucleic acid synthesis in induced ectoderm. *Triturus* spec. *(Urodela)* (in collaboration with S. I. TOIVONEN)

KOJIMA, M. K. D.Sc. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, (517) Japan •
a Physiological studies on the cleavage of eggs. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)*

KOLLAR, E. J. Ph.D. — Dept. of Anat., Div. of Biol. Sci., Univ. of Chicago, 1025 E. 57th St., CHICAGO, Ill. 60637, U.S.A.
a Differentiation of skin derivatives with special reference to teeth, vibrissae, and feathers; combinations of epithelial and mesodermal tissues are used to determine: the roles of these tissues, the inductive sequence, and the temporal and spatial stability and plasticity of the integument during early stages. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Suppression and stimulation of neural crest and integumental differentiation by: Beta-2-thienylalanine, nerve growth factor, and anti-nerve growth factor. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

KOLLROS, J. J. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Influence of thyroid hormones upon limb regeneration in tadpoles. *Bufo americanus, Pseudacris nigrita, Rana pipiens (Anura)*
b Tissue responses and control of sequence in metamorphosis. *Rana pipiens, R. catesbeiana, Pseudacris nigrita, Ambystoma jeffersonianum (Amphibia)*

c Development of spinal and cerebral centers. *Rana pipiens, R. catesbeiana, Pseudacris nigrita, Bufo americanus (Anura)*
d Delineation of skin territories of different developmental capacities, especially as indicated by gland development. *Rana pipiens* and other spp. *(Anura)*

KOMÍNKOVÁ, Miss E. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a Submicroscopic structure and cytochemistry of Hofbauer cells. *Mus rattus (Rodentia), Felis domestica (Carnivora), Homo sapiens (Primates)*
b Histogenesis of the connective tissue cells of chorionic villi. *Homo sapiens (Primates)*

KONDO, K. B.Sc. — Dept. of Biophys. and Biochem., Fac. of Sci., Univ. of Tokyo, 7-3-1 Hongo, Bunkyo-ku, TOKYO 113, Japan
a Reaggregation of dissociated embryonic cells, especially the search for cell-reaggregating substances as known in Porifera. *(Echinoidea), Triturus pyrrhogaster (Urodela)*
b Adhesiveness of cells: 1. mechanism of adhesion. 2. changes in adhesiveness accompanying development and their significance. *(Echinoidea), Triturus pyrrhogaster (Urodela)*

KONIGSBERG, I. R. Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va. 22903, U.S.A.
a Cytodifferentiation of skeletal muscle in clonal cell culture. *Gallus domesticus (Aves)*
b Dependent differentiation of muscle cells upon products of fibroblast biosynthesis. *Gallus domesticus (Aves)*

KONIJN, Th. M. Ph.D. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a Chemotaxis, cell aggregation and differentiation. *(Acrasiales)*
b Adenosine-3',5'-monophosphate and other cyclic nucleotides during morphogenesis in lower and higher organisms

KONYSHEV, V. A. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.
a Tissue growth promoting and inhibiting substances: isolation, chemical characterization, action on tissues and relation of chemical nature to action mechanism. *Gallus domesticus (Aves)*

KONYUKHOV, B. V. Dr.biol.Sci. — Phenogenet. Lab., Inst. of Gen. Genet., Acad. of Sci. of the U.S.S.R., Profsojuznay St. 7 (1), MOSCOW B-133, U.S.S.R.
a Developmental study of mutational effects of genes which lead to eye and skeletal abnormalities. *Mus musculus (Rodentia)*
b Study of lens proteins by electrophoresis. *Mus musculus (Rodentia)*
c Study of mechanisms of eye and skeletal abnormalities by organ culture. *Mus musculus (Rodentia)*
d Methods for the prevention of some inherited abnormalities by administering drugs. *Mus musculus (Rodentia)*

KORKIA (NIJARADZE), Mrs. I. K. Cand.biol.sci. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

KORN, H. F. Dr.rer.nat. — I. Zool. Inst., Naturw. Fak., Friedrich-Alexander Univ., Universitätsstr. 19, 852 ERLANGEN, W.Germany
a Development. *(Nemathelminthes)*
b The postlarval brain. *(Polychaeta)*

KORNELIUSSEN, H. K. — Anat. Inst., Univ. of Oslo, Karl Johansgt. 47, OSLO, Norway

KORNGUTH, S. E. Ph.D., Prof. — Depts. of Neurol. and Physiol. Chem., Coll. of Med., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.
a Changes in histone distribution during the development of the nervous system. *(Vertebrata)*
b Proteins of the synaptic complex and development of synaptic contacts in nervous tissue. *(Vertebrata)*

KOROTCHKIN, L. I. Dr.med. sci., Prof. — Inst. of Cytol. and Genet., NOVOSIBIRSK 90, U.S.S.R.
a Experimental morphology, cytochemistry and cytophysiology of the developing nervous system. *Ambystoma mexicanum (Urodela), Rattus norvegicus, Mus musculus (Rodentia)*
b Development of the pigment cell. *Ambystoma mexicanum (Urodela), Rattus norvegicus, Mus musculus (Rodentia)*

KOROTKOVA, Mrs. G. P. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.
a Comparative study of the processes of regeneration, asexual reproduction and somatic embryogenesis. *Leucosolenia complicata, Sycon lingua, Halichondria panicea* and other spp. *(Porifera)*

KOŚCIELSKI, B. D.Sc. — Zaklad Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul. Sienkiewicza 21, WROCŁAW, Poland
a Polyembryony. *Dendrocoelium* spec. *(Turbellaria)*

KOSHIDA, Y. D.Sc. — Dept. of Biol., Coll. of Gen. Educ., Osaka Univ., Toyonaka, OSAKA, 560 Japan
a Cytological studies on the presence of recognizable sex-associated differences. *Gallus domesticus, Coturnix coturnix japonica, Meleagris gallopavo (Aves)*

b Histochemical studies on developing photoreceptors. *Lymnaea* spec., *Euhadra* spec., *Limax* spec. *(Pulmonata), Monodonta* spec., *Conomurex* spec., *Littorina* spec. *(Prosobranchia, Gastropoda), Pecten* spec., *Chlamys* spec. *(Lamellibranchia), Octopus* spec. *(Octopoda), Sepia* spec. *(Decapoda, Cephalopoda)*

KOSIN, I. L. Ph.D., Prof. — Lab. of Developm. Biol., Dept. of Anim. Sci., Washington State Univ., PULLMAN, Wash. 99163, U.S.A.

KOSKIMIES, O. J. M.D. — Lab. of Exper. Embryol., Dept. of Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI 10, Finland

a Virus-induced abnormalities in embryonic development. *Homo sapiens (Primates)* (in collaboration with L. O. SAXÉN, Dept. of Pathol.)

KOSTELLOW, Miss A. B. Ph.D. — Dept. of Physiol., Albert Einstein Coll. of Med., Yeshiva Univ., 1300 Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

a Enzyme induction in the embryo; the conditions controlling the synthesis of tissue specific enzymes from competive pathways of tryptophan metabolism leading to the production of kynurenine or serotonin are being studied in dissociated late blastula and early gastrula cells. *Rana pipiens (Anura)*

b The ionic events that occur during blastula formation which are associated with morphogenesis and cell differentiation: the transport of cytoplasmic Na^+ into the blastocoel. 1. Mapping the changing electric fields at the surface of the developing embryo and correlating these fields with known patterns of cell migrations. 2. Monitoring the rate of Na^+ release in each of the germ layers. 3. Assaying for vasopressin-like hormone activity in blastula extracts. *Rana pipiens (Anura)*

KOSTOMAROVA, Mrs. A. A. Cand.biol.sci. — Lab. of Biochem. Embryol., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

KOTANI, M. M.Sc. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan

a Nature of germinal cytoplasm. *Xenopus laevis (Anura)*

KOZIK, M. M.D. — Dept. of Neurol., Med. Acad., Przybyszewskiego St. 49, POZNAŃ, Poland

a Histochemistry of glia cells in the developing nervous system.

b Histochemical mapping of the developing brain.

KRAICER, P. F. Ph.D., Prof. — Dept. of Zool., Tel-Aviv Univ., 155 Herzl St., TEL-AVIV, Israel

a Changes in the follicular oocyte preceding ovulation. *Rattus norvegicus (Rodentia)*

b Composition of follicular fluid. *Homo sapiens (Primates)*

KRÁL, B. RNDr. — Dept. of Morphol., Inst. of Vertebr. Zool., Czechoslov. Acad. of Sci., Květná, 8, BRNO, Czechoslovakia

a Comparative studies of chromosomes. *(Lacertilia; Rodentia; Insectivora: Chiroptera)*

KRAMER, J. P. Ph.D., Prof. — Dept. of Entomol. and Limnol., Cornell Univ., 10 Comstock Hall, ITHACA, N.Y. 14850, U.S.A.

a Morphological development of entomophilic forms. *Octosporea muscaedomesticae (Microsporidia, Sporozoa)*

b Pathogenesis of octosporeosis. *Phormia regina, Musca domestica (Diptera)*

KRANTZ, Mrs. H. Dr.med. — Anat. Inst. der Univ. Rostock, Gertrudenstr. 9, 25 ROSTOCK 1, East Germany

a Einfluss des Alters einer Kultur auf die Zellkerngrösse

b Der Zellkern im Organismus und im Explantat.

c Development of the Hortega-cells

KRATOCHWIL, K. Dr.phil. — Inst. für Krebsforsch., Univ. Wien, Borschkegasse 8a, Postfach 72, A-1090 WIEN, Austria

a Organ-specificity in mesenchymal induction. *Mus musculus (Rodentia)*

b Endocrine control of development. *Mus musculus (Rodentia)*

c Mammary gland development. *Mus musculus (Rodentia)*

KRAUS, Miss C. Dr.phil. — Hirnanat. Inst. der Psychiatr. Univ. Klinik Bern, 3072 OSTERMUNDIGEN-BE, Switzerland

a Ontogenesis of the brain. *(Cetacea)*

KRAUS, R. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia

a Differentiation and role of prechordal plate in early development of cephalic region (submicroscopic and cytochemical studies in normal and experimental conditions). *Gallus domesticus (Aves), Mus rattus (Rodentia), Homo sapiens (Primates)*

b Differentiation of the chemoreceptor cell (comparative studies on the submicroscopic structure, enzyme histochemistry). *(Rodentia; Carnivora), Homo sapiens (Primates)*

KRAUSE, G. Dr.phil., Prof. — Zool. Inst. der Univ., Röntgenring 10, 87 WÜRZBURG, W.Germany
— Heiligenberg Inst., 7799 HEILIGENBERG, Baden, W.Germany

a Experimentell erzeugte duplicitas cruciata. *Tachycines asynamorus (Orthoptera)*

b Analyse der Keimanlagenbildung. *Bombyx mori (Lepidoptera)*

c Vergleichende Embryonalentwicklung. *(Insecta)*
d Kultur embryonaler Gewebe. *(Insecta)*

KREDIET, P. M.V.D. — Dept. of Anat. and Embryol., Med. Fac. Rotterdam, William Boothlaan 18, ROTTERDAM-2 -038, Netherlands
a Ontogenetic malformations of the heart and great vessels in neonates and adults. *Homo sapiens (Primates)* and other mammals
b Development of the heart and great vessels. *(Aves), Homo sapiens (Primates)* and other mammals
c Experimental malformations and regeneration of blood vessels. *(Aves), Homo sapiens (Primates)* and other mammals

KREJSA, R. J. Ph.D. — Biol. Sci. Dept., Calif. State Polytechn. Coll., SAN LUIS OBISPO, Calif. 93401, U.S.A.
a Development and mineralization of scales; role of the epidermis in scale development; light and electron microscopy of developing skin. *Poecilia reticulata, Oryzias latipes, Salvelinus fontinalis (Teleostei)* (in collaboration with Miss S. A. LUSE)
b Inductive interactions between epidermis and dermis: comparative aspects of integument morphogenesis. *(Invertebrata, Vertebrata)*

KRETCHMER, N. Ph.D., M.D., Prof. — Dept. of Pediat., School of Med., Stanford Univ., 300 Pasteur Drive, PALO ALTO, Calif. 94304, U.S.A.
a Developmental enzymology: 1. disaccharidases in developing intestine; 2. pyrimidine biosynthesis in the fetal heart. *Rattus norvegicus (Rodentia), Zalophus californianus (Phocidae, Carnivora)*

KRITCHINSKAYA, Miss E. B. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., LENINGRAD B-164, U.S.S.R.
a Asexual reproduction, regeneration and somatic embryogenesis. *Dugesia tigrina (Turbellaria)*

KROEGER, H. Dr.rer.nat., Prof. — Inst. für Genet., Univ. des Saarlandes, 66 SAARBRÜCKEN 11, W.Germany
a Puffing patterns in giant chromosomes and the mechanism by which they are evoked and controlled. *Chironomus thummi, Ch. tentans (Diptera)*
b Embryology and genetics of pattern formation. *Drosophila melanogaster (Diptera)*

KROHN, P. L. B.M., B.Ch., Prof. (Emer.) — La Forêt, St. Mary, JERSEY, Channel Islands, U.K.

KRONE, H. A. Dr.med., Prof. — Staatl. Frauenklinik und Hebammenschule, Markusplatz 3, 86 BAMBERG, W.Germany

KRZANOWSKA (DATKÓWNA), Mrs. H. Ph.D. — Dept. of Anim. Genet. and Org. Evol., Jagellonian Univ., Krupnicza 50, KRAKÓW 2, Poland
a Studies of heterosis: sperm characters, fertilization and cleavage rate in inbred and crossbred animals. *Mus musculus (Rodentia)*

KRZYSZTOFOWICZ, Miss A. D.Sc. — Zool. Dept., Jagellonian Univ., ul.Krupnicza 50, KRAKÓW, Poland
a Spermatogenesis. *(Collembola)*
b Embryonic development. *Tetranychus urticae (Acarina)*

KUBLI, E. cand.phil. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH-8006 ZÜRICH, Switzerland
a Nucleic acids of various mutants. *Drosophila melanogaster (Diptera)*

KUBOTA, K. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria

KUBOTA, T. D.Sc., Prof. — Biol. Lab., Liberal Arts Coll., Kagoshima Univ., Kamoike-cho, KAGOSHIMA-shi, 890 Japan
a Studies of cleavage. *Cynops (= Triturus) pyrrhogaster (Urodela)*
1. Mechanism of determining furrow positions and furrow advance at animal, equatorial and vegetal regions
2. Direction of cleaving force and site of origin

KUCIAS, J. Ph.D. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
a Entropy in cell differentiation; determination of the oxygen consumption in vivo. *Ambystoma tigrinum (Urodela), Xenopus laevis (Anura), (Rodentia)*

KUDOKOTSEV, V. P. B.Sc. — Dept. of Biol., Kharkov State Univ., Dzerjinsky Square 4, KHARKOV, U.S.S.R.
a Experimental investigations in limb regeneration. *(Vertebrata)*

KUHN, A. † Dr.rer.nat., Prof. — Max Planck Inst. für Biol., Abt. Beermann, Spemannstr. 34, 74 TÜBINGEN, W.Germany
(deceased)

KUHN, O. Dr.rer.nat., Prof. (Emer.) — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
a Hormonwirkungen in der Morphogenese
b Entwicklungsphysiologie der Feder. *(Aves)*
c Wirkungsweise carcinogener und anderer Substanzen auf tierische Gewebe
d Regeneration und Wundheilung

KUIJEN, C. J. van M.Sc. — Zool. Lab., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands
a Functional aspects of development of the vascular system. *Rana temporaria (Anura)*
KULANGARA, A. C. Ph.D., Prof. — Dept. of Anat., Woman's Med. Coll., 3300 Henry Ave., PHILADELPHIA, Pa. 19129, U.S.A.
a An investigation of the genetic and antigenic differences among spermatozoa, using immunological techniques. *Lepus* spp. *(Lagomorpha)*
b Seminal antigens (spermatozoa and plasma) from three breeds. *Ovis aries* (Artiodactyla)
c Seminal antigens. *Homo sapiens (Primates)*
d Passage of homologous and heterologous proteins from the mother into the early conceptus. *Lepus* spp. *(Lagomorpha)*
KUNZ, W. — Zool. Inst. der Westf. Wilhelms-Univ., Badestr. 9, 44 MÜNSTER/Westf., W.Germany
a Nuclear structure (lampbrush chromosomes, multiple nucleoli and extra DNA) of the germinal vesicle in the panoistic ovary. *Gryllus domesticus (Orthoptera)*
b Uptake of haemolymph proteins in the oocyte and its deposition in the yolk platelets. *Gryllus domesticus, Locusta migratoria (Orthoptera)*
KUNZ (RAMSAY), Mrs. Y. W. Dr.phil. — Zool. Dept., Univ. Coll. Belfield, Stillorgan Road, DUBLIN 4, Ireland
a Development of lactate dehydrogenase isoenzyme pattern from fertilized egg through metamorphosis. (Zone electrophoresis in starch gel and agar gel.) *Xenopus laevis (Anura)*
b Development of lactate dehydrogenase isoenzyme patterns during embryonic and post-embryonic period; comparison of species and hybrid offspring. (Starch gel and agar gel electrophoresis.) *Salmo trutto forma fario, S. salar* and hybrids (Salmonidae, *Teleostei)*
KURAHASHI, K. — Biol. Lab., Osaka Dental Coll., Saka, HIRAKATA, Osaka Pref., Japan
KURIHARA, M. — Inst. of Appl. Entomol., Fac. of Agric., Iwata Univ., Ueda 3-18, MORIOKA, Japan
KURU, M. M.D. — Natl. Cancer Centre Hosp., Tsukiji 5 chome, Chuoku, TOKYO, Japan
KURULASHVILI, Mrs. L. I. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.
KÜTHE, H. W. Dr.rernat. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
a Determination problems in early development; changes of protein pattern in the yolk system. *Dermestes frischi (Coleoptera)*
KUUSI, Miss T. K. Ph.D. — Lab. of Exper. Embryol., Dept. of Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI 10, Finland •
(no embryological work in progress)
KVINIKHIDZE (CICISHVILI), Mrs. G. S. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., Chavchavadze St. 31, TBILISI, U.S.S.R.
KVINNSLAND, S. — Inst. of Anat., Univ. of Bergen, BERGEN, Aarstadvollen, Norway
a The profile of the foetal face, an anthropological and roentgen anatomical study of the foetal face and cranial base in their sagittal growth processes. *Homo sapiens (Primates)*
b Early spread of ossification of the upper and lower jaws. *Homo sapiens (Primates)*
KVIST, T. N. B.Sc. — Dept. of Biol., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
KYÔNO (NAKAGAWA), Mrs. H. M.A. — Embryol. Sect., Biol. Dept., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan
a Localization of ATP-ase and protein-bound-SH in the ova. *Hemicentrotus pulcherrimus (Echinoidea)*
b Analysis of myotube formation in cultured embryonic cells. *Gallus domesticus (Aves)*
LAALE, H. W. Ph.D. — Dept. of Zool., Univ. of Manitoba, WINNIPEG, 19, Manitoba, Canada
a Immuno-embryology; protein patterns in development. *Brachydanio rerio (Teleostei)*
b Inductive and inhibitory phenomena in ontogeny; regulatory mechanisms; growth substances. *Brachydanio rerio (Teleostei)*
LAANE, H. M. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Light-microscopical, electron-microscopical, histochemical, physiological and experimental teratogenetic studies of heart development in the embryo. *Gallus domesticus (Aves)* (in collaboration with J. DRUKKER, F. J. BIESENBEEK and J. A. LOS)
LAAT, S. W. de M.Sc. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a Electrophysiological aspects of early development, *Xenopus laevis (Anura), Ambystoma mexicanum (Urodela)* (in collaboration with P. D. NIEUWKOOP)
LABORDUS, V. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
a The effect of UV-light on cleavage and morphogenesis. *Limnaea stagnalis (Gastropoda)*
LABOUR, G. R. — Lab. de Zool., Fac. des Sci., Univ. de Paris, 91 ORSAY, France

a Cytological study of diapausing embryos, with special reference to cell ultrastructure. *Locusta migratoria gallica (Acrididae, Orthoptera)*
b Cytological study of development of fat body, with special reference to cell ultrastructure and cytochemistry. *Leptinotarsa decemlineata (Coleoptera)*

LaCHANCE, L. E. Ph.D. — Metabol. and Radiat. Research Lab., State Univ. Station, FARGO, N.D. 58103, U.S.A.
— temporarily: FAO/IAEA Div. of Atom. Energy in Agric., Internat. Atom. Energy Agency, Kärntner Ring 11, A-1010 VIENNA 1, Austria

LACROIX, J. C. — Lab. d'Embryol., Fac. des Sci., 9 quai St. Bernard, 75 PARIS Ve, France

LA CROIX, L. J. Ph.D., Prof. — Dept. of Plant Sci., Fac. of Agric., Univ. of Manitoba, WINNIPEG 19, Manitoba, Canada
a Factors affecting embryonic growth and differentiation. *Hordeum vulgare (Graminaeae)*

LACY, D. Dr. — Dept. of Zool. and Comp. Anat., St. Bartholomew's Med. Coll., Charterhouse Square, LONDON E.C.1, England

LAGUCHEV, S. S. Dr.med.sci. — Lab. of Histophysiol., Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.
a The hormonal regulation of mitotic activity and synthesis of DNA. *Mus musculus, Rattus norvegicus (Rodentia)*

LAHIRI, D. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India

LAHTI, A. — Lab. of Exper. Embryol., III Dept. of Pathol., Univ. of Helsinki, Haartmaninkatu 3, HELSINKI 25, Finland
a Drug-induced teratogenesis in vitro. *Mus musculus (Rodentia)* (in collaboration with L. O. SAXÉN and I. KAITILA)

LAI-FOOK, Miss J. E. I. Ph.D. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada
a The fine structure of development. *(Insecta)*

LAIRD, C. D. Ph.D. — Dept. of Zool., Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.
a Relationship between developmental patterns and intragenome nucleotide sequence homology. *(Insecta), (Tunicata), (Mammalia)*
b Developmental genetics of linked genes; fractionation of RNA to correlate gene expression with karyotype arrangement. *Drosophila melanogaster (Diptera)*

LAKSHMANAN, K. K. Ph.D., Prof. — Dept. of Botany, Pachaiyappa's College, MADRAS-30, India
a Descriptive and experimental embryology. *(Plantae)*
b Embryogenesis. *(Angiospermae)*
c Study of irregular embryogenesis and its possible correlation with embryo differentiation in tissue culture. *(Angiospermae)*

LAKSHMI, Miss M. S. Ph.D. — Chester Beatty Research Inst., Inst. of Canc. Research, Royal Canc. Hosp., Fulham Rd., LONDON S.W.3, England
a Morphogenetic effects of follicle-stimulating hormone. *Gallus domesticus (Aves)* (in collaboration with G. V. SHERBET)
b Behaviour of neoplastic cells transplanted into embryos. *Gallus domesticus (Aves)* (in collaboration with G. V. SHERBET)

LAL, D. M. M.Sc. — Dept. of Biochem., Fac. of Sci., Allahabad Univ., ALLAHABAD-2, India
a Quantitative studies of various metabolites in eggs, e.g. nitrogenous compounds, phosphorus compounds, reducing substances and citric acid. *Philosamia ricini (Lepidoptera), Musca domestica, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT and R. VARMA)
b Variation in the activity of some enzymes in eggs. *Philosamia ricini (Leptidoptera), Musca domestica, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT and R. VARMA)
c Quantitative studies of various metabolites during metamorphosis. *Philosamia ricini (Lepidoptera), Musca nebulo, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT, Miss I. D. MORRIS and R. VARMA)
d Quantitative studies of certain metabolites and enzymic studies on the fat body during larval and pupal development. *Philosamia ricini (Lepidoptera)* (in collaboration with Mrs. R. PANT, Miss I. D. MORRIS and R. VARMA)

LALLIER, R. A. Dr.Sc. — Station Zoologique, Fac. des Sci. de Paris, 06 VILLEFRANCHE-sur-Mer, France
a Biochemical aspects of embryonic determination (studies of animalizing and vegetalizing agents). *Paracentrotus lividus (Echinoidea)*

LAMBIOTTE, M. G. D. Dr.ès Sci. — Centre de Rech. sur la Nutrit. du C.N.R.S., 9 rue Emile, 92 BELLEVUE, France

LAMONT, Miss D. M. M.A. — Dept. of Chem., Univ. Coll. London, Gower St., LONDON W.C.1, England

LAMPEL, G. Dr.rer.nat., Prof. — Zool. Inst., Naturw. Fak., Univ. Freiburg, CH-1700 FREIBURG, Switzerland

a Researches on the sequence of morphs in cyclic reproduction. *Pemphigus spirothecae (Homoptera)*

LANDAUER, W. Ph.D., Prof. — Dept. of Anim. Genet., Univ. Coll. London, Wolfson House, 4 Stephenson Way, LONDON N.W.1, England
— private address: 16 Highgate Ave., LONDON N.6, England •

a A causal analysis of teratogenic action of insulin and other chemical compounds on developing embryos. *Gallus domesticus (Aves)*

b The nature and significance of phenocopies. *Gallus domesticus (Aves)*

LANDESMAN, R. Ph.D. — Dept. of Zool., Univ. of Vermont, BURLINGTON, Vt. 05401, U.S.A.

a Control of transcription and translation during embryogenesis. *Xenopus laevis (Anura)*

b Examination of regional differentiation by analysis of protein synthesis. *Xenopus laevis (Anura), Ambystoma mexicanum (Urodela)*

LANDSTRÖM, U. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden

a Oxygen uptake during embryogenesis. *Tubifex* spp. *(Oligochaeta)* (in collaboration with S. LØVTRUP)

LANGMAN, J. M.D., Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Virginia, CHARLOTTESVILLE, Va. 22901, U.S.A. •

a Autoradiographic and immunological analysis of muscle development in vivo. *Gallus domesticus (Aves)*

b Autoradiographic and immunological analysis of brain development under normal and abnormal conditions. *Gallus domesticus (Aves), (Rodentia)*

LANOT, R. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Catherine, 54 NANCY, France

a Malformations axiales: analyse causale de l'action tératogène du bleu trypan et de la RNA-se. *Gallus gallus (Aves)*

LANZAVECCHIA, G. Dr., Prof. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italy

LARKIN, L. H. Ph.D. — Dept. of Anat., Univ. of Colorado Med. School, 4200 E. 9th Ave., DENVER, Colo. 80220, U.S.A.

LARRIVEE, D. H. M.A. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Molecular and cellular aspects of arm formation in larvae. *Strongylocentrotus droebachiensis, S. purpuratus, S. franciscanus (Echinoidea)* (in collaboration with C. V. FINNEGAN)

LARSON, P. F. M.D. — Muscular Dystrophy Res. Labs., Newcastle Gen. Hosp., NEWCASTLE upon Tyne NE4 6BE, England

a Electron microscope studies of embryonic muscle and of myoblasts grown in tissue culture to determine the temporal and spacial relationships between the polyribosomes and the developing myofilaments. *Gallus domesticus (Aves), Mus musculus, Rattus norvegicus (Rodentia), Homo sapiens (Primates)*

LARSSON, K. S. Odont. D., Prof. — Lab. of Teratol., Karolinska Inst., S-104 01 STOCKHOLM 60, Sweden

a Chemical interaction with mucopolysaccharide synthesis during embryogenesis and fetal development. *Mus musculus, Rattus norvegicus (Rodentia)*

b Experimental developmental morphology: studies on facial formation. *Mus musculus, Rattus norvegicus (Rodentia)*

LASH, J. W. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A. •

LASHER, R. S. Ph.D. — Dept. of Biol., Univ. of Calif. San Diego, LA JOLLA, Calif. 92037, U.S.A.

LA SPINA, Miss R. D.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy

a Fine structure of unfertilized eggs and egg fragments. *Ascidia malaca (Ascidiae)*

b The analysis of the colour pattern. *Discoglossus pictus (Anura)*

LASSAU, J. P. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France

a Croissance de la vulve. *Homo sapiens (Primates)*

LATSHAW, W. K. Ph.D., Prof. — W.C.U.M., Univ. of Saskatchewan, SASKATOON, Sask., Canada

a Closure mechanisms of optic fissure. *(Mammalia)*

LAUFER, H. Ph.D., Prof. — Div. of Biol. Sci., Life Sciences Bldg U-42, Univ. of Connecticut, STORRS, Conn. 06268, U.S.A. •

LAUGÉ, Miss G. Dr.ès Sci. — Lab. d'Entomol. et de Zool., Fac. des Sci., Univ. de Paris, 91 ORSAY, France

a Experimental study of determination and differentiation of genital apparatus, triploid intersexes. *Drosophila melanogaster (Diptera)*

LAVALLE, D. B.Sc. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4°andar, C.P. 253, BELO HORIZONTE, M.G., Brazil

a Quantitative relations between DNA content and nuclear volume in relation with the germinal line (spermatogenesis). *Bufo paracnemis (Anura)*

b Determination of the DNA content in polyploid animals. *Ceratrophrys dorsata, Odontophrynus cultripes, O. dorsata, Bufo paracnemis (Anura)*

LAVARACK, J. O. Ph.D. — School of Anat., Univ. of Melbourne, PARKVILLE 3052, Vict., Australia

a Histochemical investigation of cell interactions in the development of primary tissues. *Gallus gallus (Aves)*

LaVELLE, A. Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, P.O. Box 6998, CHICAGO, Ill. 60680, U.S.A.

a Cytodifferentiation of neurons. *Cavia cobaya, Cricetus auratus (Rodentia)*

b Critical periods in neuronal maturation. *Cricetus auratus (Rodentia)*

c Total lipid and phospholipid changes during neuronal maturation. *Cricetus auratus (Rodentia)*

d Immunochemical characteristics of developing brain. *Cricetus auratus (Rodentia)*

e Immunochemical characteristics of developing lens tissue. *Gallus gallus (Aves)*

f Drug effects on developing nervous tissue. *Ambystoma maculatum (Urodela)* (in collaboration with Mrs. F. LaVELLE)

LAVELLE, C. L. B. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England

a Embryology of the dental cusp pattern. *Rattus norvegicus (Rodentia), Homo sapiens (Primates)*

LaVELLE (WILSON), Mrs. F. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, P.O. Box 6998, CHICAGO, Ill. 60680, U.S.A.

a Hormonal control of early sex differentiation. *Cricetus auratus (Rodentia)*

b Critical periods in neuronal differentiation. *Cricetus auratus (Rodentia)*

c Cytochemical differentiation of nervous tissue. *Cricetus auratus (Rodentia)*

d Drug effects on developing nervous tissue. *Ambystoma maculatum (Urodela)* (in collaboration with A. LaVELLE)

LAWRENCE, A. J. Ph.D. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.

a Growth and differentiation of pancreas. *Gallus domesticus, (Aves)*

LAWRENCE, I. E., Jr. Ph.D., Prof. — Dept. of Biol., East Carolina Univ., Box 2577, GREENVILLE, N.C. 27834, U.S.A.

a Comb development. *Gallus domesticus (Aves)*
1. A timed sequence of reciprocal comb and non-comb tissue grafts for tissue interactions.
2. Development of the feathered crest fowl's comb primordium in an experimentally altered position.
3. Tissue reaggregation of comb and feather skin grafts.
4. Histochemical patterns and hormonal influence on comb tissue development.
5. Electrophoretic analysis of comb protein.

b Comb and beak malformation resulting from removal of neural crest between stages 7-9. *Gallus domesticus (Aves)*

LAWRENCE, P. A. Ph.D. — Dept. of Genet., Univ. of Cambridge, Milton Road, CAMBRIDGE, England

a The development of bristles; in particular factors controlling their position and their initiation. *Oncopeltus fasciatus (Heteroptera)*

b Developmental genetics. *Oncopeltus fasciatus (Heteroptera)*

LAWSON, Miss K. A. Ph.D. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a Morphogenesis and functional development of the parotid gland in vivo and in vitro. *Rattus rattus (Rodentia)*

b Response of embryonic limb-bone rudiments to thyroid hormones in vitro. *Gallus domesticus (Aves)*

LAZARD (HAUBEN), Mrs. L. Dr.ès Sci. — Inst. d'Embryol. et Tératol expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France

a Limb regeneration, after X-irradiation, and grafts of various tissues and organs. *Siredon mexicanum (Urodela)*

b Late regulation in the embryonic limb. *Gallus domesticus (Aves)*

LEACH, C. M. Ph.D., Prof. — Dept. of Bot. and Plant Pathol., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.

a Light induction of reproduction in phytopathogenic species. *(Fungi)*

b Nature of sporogenic substances "P_{310}" associated with spore formation. *(Fungi)*

c Interaction of light and temperature on the induction of reproduction. *(Fungi)*

LEBLOND, C. P. M.D., Ph.D., Prof. — Dept. of Anat., McGill Univ., MONTREAL 2, Que., Canada

a Development of the thyroid gland. *(Vertebrata)*

b The development of bones and teeth as shown on radioautographs with the help of various labeled substances. *(Vertebrata)*

LEDERMAN, R. J. M.D., Ph.D. — Sect. on Exper. Embryol., Ophthalmol. Branch, Natl. Inst. of Neurol. Dis. and Stroke, Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A.

a Development of retinal centrifugal fibers. *Gallus domesticus (Aves)*

LE DOUARIN, G. H. Dr.ès Sci. — Lab. de Physiol. anim. et cellulaire, Fac. des Sci. de l'Univ. de Nantes, 38 Bd. Michelet, B.P. 1044, 44-NANTES, France

a Action des rayons X sur la physiologie et le développement du coeur embryonnaire. *Gallus gallus (Aves)*

b Electrophysiologie du coeur embryonnaire. *Gallus gallus (Aves)*

c Métabolisme des organes embryonnaires en culture in vitro

d Etude expérimentale de la différenciation des cellules myocardiques. *Gallus gallus (Aves)*

e Etude expérimentale de la différenciation hypophysaire. *Gallus gallus (Aves)*

LE DOUARIN (CHAUVAC), Mrs. N. M. Dr.ès Sci., Prof. — Lab. d'Embryol., Fac. des Sci. de Nantes, 38 Bd. Michelet, B.P. 1044, 44-NANTES, France

a Etude expérimentale du développement du tube digestif. *Gallus gallus (Aves)*

b Etude expérimentale du développement du foie. *Gallus gallus (Aves)*

c Etude de la différenciation biochimique des hépatocytes. *Gallus gallus (Aves)*

d Etude expérimentale de la différenciation hypophysaire. *Gallus gallus (Aves)*

e Etude expérimentale de la différenciation de la glande thyroide. *Gallus gallus (Aves)*

LEDOUX, L. D.Sc. — Lab. de Biochim. cell., Dépt. de Radiobiol., Centre d'Etude de l'Energie Nucléaire, MOL, Belgium

a Uptake, fate, and biological effect of exogeneous DNA in living systems, with special attention to embryonic and cancer tissues. *Hordeum* spec., *Arabidopsis* spec. *(Angiospermae), Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

LEE, H. H. Ph.D. — Dept. of Biol., Univ. of Toledo, TOLEDO, Ohio 43606, U.S.A.

a In vitro studies of DNA synthesis induced by Rous sarcoma virus infection in differentiating embryonic cells. *Gallus gallus (Aves)*

b Cytodifferentiation and cell interactions in vitro of testicular tissues with respect to DNA and cell cycle studies. *Gallus gallus (Aves)*

LEES, A. D. Sc.D., F.R.S. — Imperial Coll. Field Station, Sunninghill, SILWOOD PARK, Berks., England

a Control of polymorphic development, with special reference to environmental factors. *Megoura viciae (Aphididae, Homoptera)*

LEESON, C. R. M.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Missouri, COLUMBIA, Mo. 65201, U.S.A.

a Postnatal development and differentiation of the ductus epididymidis with special emphasis upon the epithelium and the appearance of stereocilia. *Rattus rattus (Rodentia)*

b Postnatal development of muscle with emphasis on the ultrastructure of the mitochondrial population. *Sus domesticus* (miniature) *(Artiodactyla)*

LEFFINGWELL, T. P. Ph.D. — Cell Research Inst., B.L. 220, The Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.

a Site of synthesis and mode of deposition of primary wall constituents in distinctively differentiated tissues of the primary root; characterization of the Golgi-mediated wall polysaccharides (isotope labelling, autoradiography, histochemistry). *Zea mays (Gramineae)*

LEFFORD (FERNANDO), Mrs. F. Ph.D. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England

a Studies on cell locomotory behaviour in tissue culture. *Gallus domesticus (Aves), Cavia* spec. *(Rodentia)*

LEGAIT, E. J. Prof. — Lab. d'Histol., Fac. de Méd., 31 rue Lionnois, 54 NANCY, France

LEGAY, J. M. Dr.ès Sci., Prof. — Sect. de Biol. Génér. et Appl., Fac. des Sci. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Postembryonic development in relation to parental generation and selection. *Bombyx mori (Lepidoptera), Ceratitis capitata (Diptera)*

LEGENDRE, R. Dr.rer.nat., Dr.ès Sci., Prof. — Lab. de Zool., Fac. des Sci. de Montpellier, Place Eugène Bataillon, 34 MONTPELLIER, France

a Embryonic and post-embryonic development. *(Araneida, Arachnida)*

LEGHISSA, S. Ph.D., Prof. — Ist. di Anat. Comp., Univ. di Bologna, Via Belmeloro 8, BOLOGNA (103), Italy

LEGNAME, A. H. Dr.Biochem. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina

a Respiratory metabolism. *Bufo arenarum (Anura)*

b Mitochondria during embryogenesis. *Bufo arenarum (Anura)*

LEGNAME, C. R. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina

a Nuclear transplantation (early stages until neurulation). *Bufo arenarum (Anura)*

LE GOASCOGNE, C. D.E.S. — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôp. Saint-Antoine, 184, rue du Faubourg Saint-Antoine, PARIS 12e, France

a Anatomie vasculaire, ultrastructure et physiologie de la vésicule ombilicale (omphaloplacenta). *Rattus norvegicus albinus, Cavia cobaya (Rodentia)*

b Culture organotypique de la vésicule ombilicale. Microscopie electronique. *Rattus norvegicus albinus (Rodentia)*

c Développement in vitro des blastocystes. *Rattus norvegicus albinus (Rodentia)*

LEGRAND, Miss C. — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôp. Saint-Antoine, 184, rue du Faubourg Saint-Antoine, PARIS 12e, France
a Le trophoblaste endovasculaire. *(Rodentia)*

LEHMAN, H. E. Ph.D. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A. •

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LEIKOLA, A. H. A. Ph.D. — Lab. of Exper. Embryol., Dept. of Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI 10, Finland
a Primary induction. *Gallus domesticus (Aves)*

LEIST, K.-H. Dipl.Biol. — Zool. Inst. der Univ., Siesmayerstr. 70, 6000 FRANKFURT a.M., W.Germany
a Effects of ACTH and adrenocortical hormones. *Ambystoma* spec., *Salamandra salamandra (Urodela), Xenopus laevis (Anura)*
b Development of endocrine tissue. *Ambystoma* spec., *Salamandra salamandra (Urodela), Xenopus laevis (Anura)*
c Biochemical changes during development induced by ACTH and steroid hormones. *Xenopus laevis (Anura)*

LE'JOHN, H. E. B. Ph.D. — Fourah Bay Coll., Univ. Coll. of Sierra Leone, FREETOWN, Sierra Leone, W.Africa

LEMEŽ, L. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a Embryonal haematology. *Gallus domesticus (Aves)*
b Experimental topogenesis and morphology of the pneumogastric system. *Gallus domesticus (Aves)*

LE MOIGNE, A. — Lab. de Biol. Anim., Univ. de Paris, Fac. des Sci. d'Orsay, 91 ORSAY, France
a Développement embryonnaire (étude au microscope électronique). *(Planariidae, Turbellaria)*

LEMUS, D. Dr.Vet. — Cat. de Embriol., Escuela de Med., Univ. de Chile, Zañartu 1042, SANTIAGO, Chile

LENDER, Th. Prof. — Lab. de Biol. Anim., Univ. de Paris, Fac. des Sci. d'Orsay, 91 ORSAY, France •
a Problèmes de la régénération: substances inductrices et inhibitrices. *(Planariidae, Turbellaria)*
b Etude au microscope électronique de la régénération (en particulier des néoblastes). *Dugesia gonocephala (Turbellaria)*
c Neurosécrétion. *(Planariidae, Turbellaria)*
d Régénération. *Asterina gibbosa (Asteroidea, Echinodermata)*
e Culture in vitro d'organes larvaires. *Galleria* spec. *(Lepidoptera), Periplaneta* spec. *(Orthoptera)*
f Culture in vitro de gonades femelles. *Tenebrio molitor (Coleoptera)*

LENDON, R. G. B.Sc. — Dept. of Pathol., Children's Hospt., Western Bank, SHEFFIELD S10 2TH, England
a Spina bifida: 1. experimental production by means of trypan blue. 2. embryogenesis of the defects produced. 3. attempts to produce some of the defects by means of hypoxia. *Rattus norvegicus (Rodentia)*

LENICQUE, P. M. Dr.ès. Sci. — Lab. de Biol. des Invert. Marins, Museum Natl. d'Hist. Nat., 57 rue Cuvier, PARIS Ve, France
a Rôle des neurohormones aux cours de la régénération; étude histochimique et étude pharmacologique de l'effet des neuropharmaca. *Hydra littoralis, Clava squamata (Hydroidea), Dugesia tigrina (Turbellaria)*

LENSKY, Y. Ph.D. — Dept. of Entomol., Fac. of Agric., Hebrew Univ. of Jerusalem, P.O.B. 12, REHOVOTH, Israel
a Changes occurring in proteins of haemolymph during metamorphosis. *Apis mellifica* var. *ligustica (Hymenoptera)*
b Separation, characterization and identification of proteins of haemolymph, in three castes and in two races. *Apis mellifica* var. *ligustica (Hymenoptera)*
c Distribution of blood antigens in fluid compartments and tissues of developing and adult animals, using immuno-chemical and biochemical analysis. *Apis mellifica* var. *ligustica (Hymenoptera)*
d Distribution of blood antigens in fluid compartments and tissues in diapausing pupae and developing adults. *Hyalophora cecropia (Lepidoptera)*
e The ultrastructure of drone spermatozoa and their position in male and female storage organs. *Apis mellifica* var. *ligustica (Hymenoptera)*

LENZ, W. Dr.med., Prof. — Inst. für Humangenet. der Univ., Vesaliusweg 12/14, 44 MÜNSTER/Westf., W.Germany
a Analysis of thalidomide embryopathy in relation to time of intake. *Homo sapiens (Primates)*
LEONARD, A. Ph.D. — Lab. de Génét., Dépt. de Radiobiol., Centre d'Etude de l'Energie Nucléaire, MOL, Belgium
a Study of chromosome aberrations induced by X-irradiation in utero. *(Mammalia)*
LEONE, V. M.D. — Cat. di Embriol. e Morfol. Sperim., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy
LEONIENI, J. Dr. — Dept. of Histol. and Embryol., Acad. of Med., ul.Narutowicza 60, ŁÓDŹ, Poland
a Comparative histological, histochemical, and electron microscopical studies on the development, structure, and function of the subcommissural organ. *(Mammalia), Homo sapiens (Primates)*
LEOPOLD, R. A. Ph.D. — USDA Metab. & Radiat. Research Lab., State Univ. Station, FARGO, N.D. 58103, U.S.A.
a Cytochemistry of developing reproductive structures. *Musca domestica (Diptera)*
b In vivo and in vitro investigation of cuticle deposition during leg regeneration. *Leucophaea maderae (Dictyoptera)*
LEPORI, N. G. Prof. — Ist. di Zool., Fac. di S.M.F.N., Univ. di Sassari, Via Murroni 25, 07100 SASSARI, Italy
a Research on the origin of the asymmetry of the female gonad (blastoderm in vitro). *(Aves)*
b Research on the origin of asymmetrical heart development (blastoderm in vitro). *Gallus* spec., *Anas* spec. *(Aves)*
c Research on the inductor of the uro-genital organs. *Gallus* spec. *(Aves), Rana* spec., *Triturus* spec. *(Amphibia)*
LE ROUX, J. M. W. Dr.med.vet. — Dept. of Anat., Fac. of Vet. Sci., Univ. of Pretoria, P.O. ONDERSTEPOORT, South Africa
LESH, Miss G. E. Ph.D. — Dept. of Biol. Sci., State Univ. of New York at Albany, ALBANY, N.Y. 12203, U.S.A.
a Investigations of neoblast movement and cell differentiation. *(Hydrozoa)*
b Studies of polarity and cell differentiation. *(Polychaeta)*
LESSEPS, R. J., S.J. Ph.D. — Dept. of Biol. Sci., Loyola Univ., NEW ORLEANS, La. 70118, U.S.A.
a Ultrastructure of cell surface (embryonic liver, heart, neural retina, limb bud). *Gallus domesticus (Aves)*
LEVAK (ŠVAJGER), Mrs. B. D.Sc. — Inst. of Biol., Univ. of Zagreb, Šalata, ZAGREB, Yugoslavia
a Investigation of early differentiation; transplantation, in vitro culture. *Rattus norvegicus (Rodentia)* (in collaboration with N. ŠKREB and A. ŠVAJGER)
b Investigation on developmental capacities of tissues of the chorioallantoic membrane. *Gallus domesticus (Aves)* (in collaboration with N. ŠKREB and A. ŠVAJGER)
LEVENSON, G. E. Ph.D., D.D.S. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a Comparison of three types of embryonic cartilage when grown as monolayer cultures. *Gallus domesticus (Aves)*
b Effect of ascorbic acid in medium on growth and differentiation of embryonic cartilage in monolayer culture. *Gallus domesticus (Aves)*
c Histogenesis of embryonic liver: cell culture techniques, effects of metabolites on differentiation. *Gallus domesticus (Aves)*
LEVER, W. E. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a Temporal and spatial patterns of cell replication and nuclear degeneration during lens development and growth; computer analysis of mathematical models. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)
LEVI, C. Dr.ès Sci., Prof. — Lab. de Biol. Invert. Marins, Museum Natl. d'Hist. Nat., 57 rue Cuvier, PARIS Ve, France
a Descriptive and experimental embryology, morphogenesis, cytology (electron microscopy). *(Porifera)*
LEVI-MONTALCINI, Miss R. M.D., Prof. — Dept. of Biol., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.
a Study of action of the nerve growth factor and related problems in experimental neurobiology
b Experimental study of the structural organization and interconnection between different brain parts and ganglia. *Periplaneta americana (Dictyoptera)*
c A technique to grow nerve and glia cells from explants of brain and ganglia in order to study their growth and differentiation under different experimental conditions. *Periplaneta americana (Dictyoptera)*

LEVIS, A. G. Dr.biol.sci. — Inst. of Gen. Biol., Univ. of Padova, Via Loredan 10, 35100 PADOVA, Italy
a Myogenesis in tissue culture. *Gallus domesticus (Aves), Rattus norvegicus, Cavia porcellus (Rodentia)*
LHOTKA, J. F., Jr. M.D., Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Oklahoma, 801 NE 13th St., OKLAHOMA-City, Okla. 73104, U.S.A.
a Localization of Ca and Fe in the developing embryo. *Gallus domesticus (Aves), Sus scrofa (Artiodactyla), Homo sapiens (Primates)*
b Histochemical localizations of polysaccharides in embryo and early fetus, with emphasis on vascular system. *Homo sapiens (Primates)*
LI, Mrs. Yu-Ying FU Ph.D. — Mycol. Sect., Natl. Communic. Disease Center, U.S. Publ. Health Service, ATLANTA, Ga. 30333, U.S.A.
LIANG, H. M. Ph.D., Prof. — Dept. of Biomorphics, Natl. Defense Med. Center, P.O. Box 7432, TAIPEI, Taiwan, Republ. of China
a The action of aureomycin on the growth of thyroidectomized tadpoles. *Rana catesbeiana (Anura)*
b Microscopic study of thyroidectomized tadpoles treated with aureomycin. *Rana catesbeiana (Anura)*
c Microscopic study of the aureomycin-treated thyroid gland of tadpoles. *Rana narina (Anura)*
d Development of the pituitary gland. *Rana catesbeiana (Anura)*
LIEDKE, Mrs. K. B. Ph.D., Prof. — Dept. of Biol., Fairleigh Dickinson Univ., TEANECK, N.J. 07666, U.S.A.
(no embryological work in progress)
LIEM, K. F. Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO, Ill. 60612, U.S.A.
LIERSE, W. Dr.med. — Anat. Inst. der Univ. Basel, Pestalozzistr. 20, 4056 BASEL, Switzerland
LIMBORGH, J. van M.D., Prof. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Sex differentiation. *Anas boschas (Aves)*
b Morphogenesis of the skull. *Gallus domesticus (Aves)*
c Development of the harelip condition (descriptive studies). *Homo sapiens (Primates)*
LINDENMAYER, A. Ph.D., Prof. — Central Interfaculty, Univ. of Utrecht, Heidelberglaan 2, "De Uithof", UTRECHT, Netherlands
a Computer simulation of the development of branching filaments. *(Algae; Fungi)*
b The morphogenetic processes giving rise to phyllotactic patterns of the shoot apex. *(Pteridophyta; Spermatophyta)*
c Developmental instructions for cellular interactions and divisions considered from the point of view of automata and language theory.
LINDSAY, D. T. Ph.D., Prof. — Dept. of Zool., Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.
a Developmental regulation of chromosomal histone synthesis in the embryo. *Strongylocentrotus purpuratus (Echinoidea)*
LINDSLEY, D. L. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Genetic control of gametogenesis. *Drosophila melanogaster (Diptera)*
LIOSNER, L. D. Dr.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.
LIOTTI, F. S. Dr., Prof. — Ist. di Biol. Gener., Fac. di Med., Via del Giochetto, 06100 PERUGIA, Italy
a Richerche sulla neurosecrezione. *Dugesia lugubris (Turbellaria), Allolobophora caliginosa (Oligochaeta)*
b Richerche sull'eritropoietina. *Oryctolagus cuniculus (Rodentia)*
LIPEDE, A. G. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria
LISSIA (FRAU), Mrs. A. M. Dr. — Ist. di Zool., Fac. di S.M.F.N., Univ. di Sassari, Via Murroni 25, 07100 SASSARI, Italy
a Gonadogenesis and sexual differentiation in hermaphroditic forms. *Diplodus vulgaris, Boops salpe, B. boops, Lythognathus mormyrus (Sparidae, Teleostei)*
LIVERSAGE, R. A. Ph.D., Prof. — Ramsay Wright Zool. Labs., Dept. of Zool., Univ. of Toronto, 25 Harbord St., TORONTO 5, Ont., Canada
a Influence of nerves and endocrines on regeneration. *Triturus viridescens (Urodela)*
LIWSKA, Miss J. mgr.Biol.Sci. — Dept. of Histol. and Embryol., Fac. of Vet. Med., Warsaw Agricult. Univ., Grochowska 272, WARSZAWA, Poland
a Histochemical studies on differentiation of gonads. *Gallus domesticus (Aves)*
LÖBBECKE, E.-A. Dr. — Zool. Inst. der Univ. Köln, Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
a Biochemical investigation of UV-inactivation and visible light or sperm reactivation in eggs at very early developmental stages. *Habrobracon hebetor (= juglandis) (Hymenoptera)*

b Cell proliferation in imaginal wing discs. Various species *(Lepidoptera)*

LOBO, J. F. Ph.D. — Cell Research Lab., Dept. of Zool., Nowrosjee Wadia Coll., POONA-1, India

a Alkaline phosphatase and mucopolysaccharides in eggs and larvae (histochemical methods). *Betta splendens (Teleostei)*

b Phospholipids and non-specific esterases in larvae and adults (histochemical methods). *Rana tigrina (Anura)*

LOCKE, M. Ph.D., Prof. — Dept. of Biol., Developm. Biol. Center, Case Western Reserve Univ., 2127 Cornell Rd., CLEVELAND, Ohio 44106, U.S.A.

a The ultrastructure and physiology of insect development, particularly during the molt/intermolt cycle. *Calpodes ethlius (Hesperiidae, Lepidoptera)*

LOCKSHIN, R. A. Ph.D. — Dept. of Physiol., School of Med. and Dent., Univ. of Rochester, 260 Crittenden Blvd., ROCHESTER, N.Y. 14620, U.S.A.

LOEFFLER, C. A. Ph.D. — Dept. of Zool, Univ. of Arkansas, FAYETTEVILLE, Ark. 72701, U.S.A.

a Permeability and osmoregulation. *Rana* spp. *(Anura)*

b Various morphogenetic topics. 1. Somitogenesis. 2. Long-term interspecific tolerance. *Rana* spp. *(Anura)*

LÖFBERG, J. E. Fil.kand. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden

a Electron microscopic investigation on the process of neurulation. *Ambystoma mexicanum (Urodela)*

LOFTS, B. — Dept. of Zool. and Comp. Anat., St. Bartholomew's Med. Coll., Charterhouse Square, LONDON E.C.1, England

LOKHORST, Miss W. — Lab. of Veter. Physiol., State Univ. of Utrecht, Alex. Numankade 93, UTRECHT, Netherlands

a Physiology of respiration in embryos under influence of environmental conditions. *Gallus domesticus (Aves)* (in collaboration with C. ROMIJN)

LOMBARD (DES GOUTTES), Mrs. M. N. Lic. ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France

a Development of interactions between pituitary, pineal and gonads in vitro. *Mus musculus (Rodentia)*

b Induction of kidney tubules in metanephrogenetic mesenchyme. *Mus musculus, Rattus norvegicus (Rodentia)*

LOMBARDO, F. Dr.Biol.Sci. — Ist. di Anat. Comp., Univ. di Modena, Via Berengario 14, 41100 MODENA, Italy

a Regeneration in the adult retina. *Rana esculenta (Anura)*

b Regeneration of the retina in young animals. *Carassius auratus (Teleostei)*

c Regeneration of the cerebellum in young animals. *Tinca tinca (Teleostei)*

d Regeneration of the telencephalon in post-metamorphic animals. *Rana esculenta (Anura)*

LONDON, J. M.Sc. — Dept. of Embryol. and Teratol., Tel-Hashomer Hosp., Tel-Aviv Univ. Med. School, TEL-AVIV, Israel

a Biophysical characteristics of syncytial placenta cells at term. *Homo sapiens (Primates)* (in collaboration with L. A. NEBEL)

LONGENECKER, B. M. Ph.D. — Dept. of Zool., Fac. of Sci., Univ. of Alberta, EDMONTON, Alta., Canada

a Immunogenetic analysis of graft-versus-host reactions in the embryo using the chorioallantoic pock technique. *Gallus domesticus (Aves)*

b Effect of physical and chemical agents on immunologically competent cells using the chorioallantoic pock assay system. *Gallus domesticus (Aves)*

LOOMIS, W. F. M.D., Prof. — Graduate Dept. of Biochem., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.

LOOMIS, W. F., Jr. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.

a A biochemical and genetic investigation of the mechanisms of development. *Dictyostelium discoideum (Acrasiales)*

LOPASHOV, G. V. Dr.biol.sci., Prof. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Analysis of inductive interactions of the cells in differentiating retina by means of combinations of cells of the eye rudiment and the gastrula ectoderm. *Rana temporaria, R. arvalis, R. esculenta (Anura), Gallus domesticus (Aves)* (in collaboration with Mrs. O. A. HOPERSKAYA)

b Metaplastic potencies of embryonic and larval eye for lens and retina regeneration. *Leuciscus bergi (Cyprinidae), Anoptichthys jordani (Characidae, Teleostei)* (in collaboration with Miss A. A. SOLOGUB)

c Stimulation of metaplasia of the pure pigment epithelium of adult animals into retina by means of agents from larval (or embryonic) retina. *Rana temporaria, R. ridibunda (Anura), (Gallus domesticus (Aves), Mus musculus (Rodentia)* (in collaboration with Miss A. A. SOLOGUB)

d Analysis of the ability of combinations of some larval eye tissues for lens induction in gastrula ectoderm. *Triturus taeniatus (Urodela)*
e Analysis of the determination of the site of formation of the falciform process by means of creation of additional choroid fissures. *Leuciscus bergi (Cyprinidae, Teleostei)*
f The influence of fractionated homogenates of some differentiating tissues (retina, muscle etc.) on the differentiation of future ectoderm in uncleaved eggs and early stages of cleavage. *Triturus taeniatus (Urodela), Gallus domesticus (Aves)* (in collaboration with Mrs. L. A. NIKITINA)

LOS, J. A. M.D. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Development of the heart and cardiac malformations. *Homo sapiens (Primates)*
b Light-microscopical, electron-microscopical, histochemical, physiological and experimental teratogenetic studies of heart development in the embryo. *Gallus domesticus (Aves)* (in collaboration with J. DRUKKER, F. J. BIESENBEEK and H. M. LAANE)

LOUVET, J.-P. Dr.Biol.anim. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France
a Recherches descriptives et expérimentales sur la formation de la bandelette embryonnaire. *Carausius* spec. *(Cheleutoptera)*
b Neurogenèse. *Carausius* spec. *(Cheleutoptera)*

LOVE, D. Ph.D. — Dept. of Anat., Developm. Biol. Center, Case Western Reserve Univ., 2109 Adelbert Rd., CLEVELAND, Ohio 44106, U.S.A.
a Chemistry of developing muscle.
b Endocrine regulation of carbohydrate and nucleic acid metabolism in embryonic muscle. *Gallus domesticus (Aves)*

LØVTRUP (REIN), Mrs. H. Ph.D. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden
a Nuclear RNA metabolism during early embryogenesis. *Lytechinus variegatus (Echinoidea)*

LØVTRUP, S. Dr.Phil., Prof. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden
a Permeability and osmoregulation. *Rana* spp. *(Anura)*
b Carbohydrate metabolism. *Rana* spp. *(Anura), Gallus domesticus (Aves)* (in collaboration with S. B. NILSSON)
c Cell transformation and cell differentiation. *Rana* spp. *(Anura), Gallus domesticus (Aves)*
d Oxygen uptake during embryogenesis. *Tubifex* spp. *(Oligochaeta)* (in collaboration with U. LANDSTRÖM)

LOWER, W. R. Ph.D. — Clin. Pharmacol. Res. Inst., 2030 Haste St., BERKELEY, Calif. 94704, U.S.A.
a The genetic, biochemical, and developmental differences between two strains of a free-living dioecious form. *Panagrellus redivivus (Nematoda)*
b Genetic, biochemical, and developmental changes in strains selected for tolerance to high temperatures. *(Nematoda)*
c Axenic maintenance of various spp. for developmental studies. *(Nematoda)*

LOWERY, R. S. Ph.D. — Dept. of Botany and Zool., Sir John Cass Coll., Jewry St., LONDON E.C.3, England
(no embryological work in progress)

LOY, J. B. Ph.D. — Plant Science Dept., Univ. of New Hampshire, DURHAM, N.H. 03824, U.S.A.
a The interactions of auxins, gibberellins and growth regulators (fluorene-9-carboxylic acids). *Cucurbita maxima (Cucurbitaceae)*
b Developmental-taxonomic study on the distribution of peroxidase isozyme patterns in
g Free-martinisme spontané. *(Aves)* (en collaboration avec Mrs. Y. LUTZ-OSTERTAG)

LUBICZ (NAWROCKI), C. M. B.Sc. — Dept. of Vet. Anat., Brownlow Hill, P.O. Box 147, LIVERPOOL L69 3BX, England

LUCAS, J. S. Ph.D. — Dept. of Zool., School of Biol. Sci., Univ. Coll. of Townsville, P.O. Box 999, TOWNSVILLE, Qld., 4810 Australia
a Embryonic and larval development and their response to environmental factors. *Halicarcinus* spp. *(Brachyura, Decapoda)*

LUCEY, E. C. A. B.Sc. — Research Film Unit, Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.
a Film of normal development. *Gallus domesticus (Aves)*
b Technique of in vitro culture of embryo; descriptive material covering first 72 hours of development in vitro. *Gallus domesticus (Aves)*
c Film showing nuclear transfer technique. *(Amphibia)*

LUCKENBILL, Miss L. M. Ph.D. — Dept. of Biol. Sci., Smith College, NORTHAMPTON, Mass. 01060, U.S.A.
a Electron microscopy of early phases of epidermal wound healing. *Rana pipiens (Anura)*
b Electron microscopy of eggs. *Rana pipiens (Anura)*

LÜDTKE, H. Dr., Prof. — Zool. Inst. der Univ., Ketzerbach 53, 355 MARBURG/Lahn, W.Germany

LUDWIG, D. Ph.D., Prof. — Biol. Lab., Fordham Univ., NEW YORK, Bronx, N.Y. 10458, U.S.A.

LUDWIG, K. S. Dr.med., Prof. — Abt. Anat., Rhein-Westf. Techn. Hochschule Aachen, Germany, c/o Anat. Inst. der Univ., Pestalozzistr. 20, CH 4056 BASEL, Switzerland

LULLINI, Mrs. I. GALLIANI M.D. — Ist. di Anat. Umana Norm., Univ. di Bologna, Via Irnerio 48, BOLOGNA, Italy

LUSE, Miss S. A. — Biol. Sci. Dept., Calif. State Polytechn. Coll., SAN LUIS OBISPO, Calif. 93401, U.S.A.

a Development and mineralization of scales; role of the epidermis in scale development; light and electron microscopy of developing skin. *Poecilia reticulata, Oryzias latipes, Salvelinus fontinalis (Teleostei)* (in collaboration with R. J. KREJSA)

LUTWAK (MANN), Mrs. C. M.D., Ph.D. — A.R.C. Unit of Reprod. Physiol. & Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England

a Physiology and biochemistry of the early embryo. *Rattus rattus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

b Teratology. *Rattus rattus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

LUTZ, H. Dr.ès Sci., Prof. — Lab. de Biol. Anim., 1 Av. Vercingétorix, 63 CLERMONT-FERRAND, France

a Développement du blastoderme pendant les premières heures de l'incubation. *Anas* spec. *(Aves)*

b La polyembryonie expérimentale; l'orientation des embryons. *(Aves)*

c Polyembryonie expérimentale. *(Salmonidae, Teleostei)* (en collaboration avec Mrs. Y. LUTZ-OSTERTAG)

d Formation de l'entoblaste. *(Aves)*

e Action des ultra-sons sur l'embryon et sur différents organes. *Gallus* spec. *(Aves)* (en collaboration avec Mrs. Y. LUTZ-OSTERTAG)

f Culture in vitro du blastoderme. *(Aves)* (en collaboration avec Mrs. Y. LUTZ-OSTERTAG)

g Free-martinisme spontané. *(Aves)* (en collaboration avec Mrs. Y. LUTZ-OSTERTAG)

LUTZ (OSTERTAG), Mrs. Y. Dr.ès Sci. — Lab. de Biol. Anim., 1 Av. vercingétorix, 63 CLERMONT-FERRAND, France

a La genèse de l'asymmétrie du tractus génital et la régression des canaux de Müller par la méthode d'explantations. *Gallus* spec. *(Aves)*

b Rôle des hormones dans la différenciation primaire du sexe. *Gallus* spec., *Coturnix coturnix (Aves)*

c Polyembryonie expérimentale. *(Salmonidae, Teleostei)* (en collaboration avec H. LUTZ)

d Action des ultra-sons sur l'embryon et sur différents organes. *Gallus* spec. *(Aves)* (en collaboration avec H. LUTZ)

e Culture in vitro du blastoderme. *(Aves)* (en collaboration avec H. LUTZ)

f Free-martinisme spontané. *(Aves)* (en collaboration avec H. LUTZ)

g Hybridisation. *Anas* spec. *(Aves)*

LYNE, A. G. Ph.D. — Div. of Anim. Physiol., C.S.I.R.O., Ian Clunies Ross Anim. Res. Lab., Great Western Highway, (P.O. Box 144, Parramatta), PROSPECT, N.S.W. 2150, Australia

a Development of skin and hair. *Trichosurus vulpecula, Perameles nasuta (Marsupialia)*

b Structure and development of hair follicles and associated glands. *Ovis* spec. *(Artiodactyla)*

LYNN, W. G. Ph.D., Prof. — Biol. Dept., Grad. School of Arts and Sci., The Catholic Univ. of America, WASHINGTON, D.C. 20017, U.S.A.

a Melanogenesis and melanin turnover. *Xenopus laevis, Rana sylvatica, R. pipiens (Anura)*

b Skin development and ecdysis. *Sceloporus occidentalis (Lacertilia), Chionactis occipitalis (Ophidia)*

LYONS, Miss K. M. Ph.D. — Zool. Dept., King's Coll., Strand, LONDON W.C.2, England

a Electron microscope studies on the development of the outer body layers. *Entobdella soleae (Monogenea, Trematoda)*

LYSER (SHOUBY), Mrs. K. M. Ph.D., Prof. — Dept. of Biol. Sci., Hunter Coll. of the City Univ. of New York, 695 Park Ave., NEW YORK, N.Y. 10021, U.S.A.
— (Guest Invest.) The Rockefeller Univ., NEW YORK, N.Y. 10021, U.S.A.

a Differentiation of the central nervous system; electron microscopy. *Gallus domesticus (Aves)*

b Effects of adjacent tissues and other factors on differentiation of neural tube in organotypic culture; light and electron microscopy. *Gallus domesticus (Aves)*

LYTLE, Ch. F. Ph.D., Prof. — Dept. of Zool., North Carolina State Univ., Box 5577, RALEIGH, N.C. 27607, U.S.A.

a Nucleic acid metabolism in intracellular parasite development. *Eimeria tenella (Sporozoa*

b Factors influencing budding. *Hydra littoralis, Chlorohydra hadleyi (Hydroidea)*

c Growth and development in marine species. *Eudendrium ramosum, E. carneum, Pennania tiarella (Hydroidea)*

McCAFFERTY, R. E. Ph.D., Prof. — Dept. of Anat., Med. Center, West Virginia Univ., MORGANTOWN, W.Va. 26506, U.S.A.

McCALLION, D. J. Ph.D., Prof. — Dept. of Anat., Fac. of Med., McMaster Univ., HAMILTON, Ont., Canada
a Development of specific proteins in the central nervous system studied by fluorescence and electrophoresis. *Gallus domesticus (Aves)*
b Specific chemical relationships in the development and regeneration of the lens. *Gallus domesticus (Aves)*
c Heterogenous induction. *Gallus domesticus (Aves)*
d Teratological and embryotoxic effects of tissue antibodies. *Gallus domesticus (Aves), Rattus norvegicus, Mus musculus (Rodentia)*

McCANCE, I. — Dept. of Physiol., Monash Univ., CLAYTON, Vict. 3168, Australia
a Descriptive morphology and histochemistry, and experimental morphology of the cerebellum (C.R. length 2 cm until after birth). *Felis domestica (Carnivora)*

McCLURE, T. Ph.D. — Dept. of Anat., Med. School, Univ. of Oklahoma, 801 NE 13th St., OKLAHOMA-City, Okla. 73104, U.S.A.
a Developmental variations in the central nervous system. *Papio* spec., *Macaca mulatta (Primates)*

McCONKEY, E. H. Ph.D., Prof. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A.

McDEVITT, D. S. Ph.D. — Dept. of Anim. Biol., School of Vet. Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a The soluble lens proteins (crystallins) in lens differentiation, as studied by column chromatography, electrophoresis, and immunofluorescence. *Rana pipiens (Anura)*

MACELA, A. RNDr. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia
a Proteins and antigens in early development. *(Amphibia)* (in collaboration with A. ROMANOVSKÝ, J. PALEČEK and J. MÁCHA)

McFARLANE, A. B.Chir. — Dept. of Anat., The Univ., NEWCASTLE upon Tyne 1, England

McGAUGHEY, R. W. Ph.D. — Worcester Found. for Exper. Biol., 222 Maple Ave., SHREWSBURY, Mass. 01545, U.S.A.
a The rate of repair of chromosome breaks in primary spermatocytes at various times after X- and cobalt irradiation. *Mus musculus (Rodentia)*
b X-irradiation during gestation to determine doses lethal and teratological to embryos and fetuses; karyotype studies of irradiated fetuses. *Meriones unguiculatus (Rodentia)*
c Chromosome and immunological study of hybrids. *Mustela vison* x *M. putorius (Carnivora)*
d Chromosome study of hybrids. *Oryctolagus cuniculus x Lepus americanus (Lagomorpha)*

McGOVERN, P. T. — Dept. of Anat., Royal Vet. Coll., LONDON N.W.1, England
a Immunological aspects of foetal-maternal relationships exemplified by hybrid gestation. *Capra hircus* x *Ovis aries (Artiodactyla)* (in collaboration with J. L. HANCOCK)

MÁCHA, J. RNDr. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia
a Proteins and antigens in early development. *(Amphibia)* (in collaboration with A. ROMANOVSKÝ, J. PALEČEK and A. MÁCELA)

McKEEHAN, M. S. † Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va. 22901, U.S.A.
(deceased)

McKENZIE, J. M.D. — Dept. of Embryol., Marischal Coll., Univ., of Aberdeen, ABERDEEN AB9 1AS, Scotland, U.K.
a The metabolic characteristics of different tissues in the early embryo. *Gallus gallus (Aves)*
b The cytological effects of metabolic inhibitors on the early embryo. *Gallus gallus (Aves)*
c The effects of adult tissue homogenates on the early embryo and cell cultures. *Gallus gallus (Aves)*

McKIEL, G. D. M.A. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
a Study of contact inhibition in synchronous populations of heart fibroblasts. *Gallus gallus (Aves)*

McKINNELL, R. G. Ph.D., Prof. — Dept. of Biol., Tulane Univ., NEW ORLEANS, La. 70118, U.S.A.
a Nuclear transplantation studies: 1) developmental potential of transplanted embryonic nuclei; 2) morphological and biochemical similarities of isogenic groups. *Rana areolata circulosa (Anura)*
b Histocompatibility studies in animals produced by nuclear transplantation. *Rana pipiens (Anura)* (in collaboration with E. P. VOLPE)

MACKLIN, M. R. Ph.D. — Dept. of Biomed. Engin., Case Western Reserve Univ., CLEVELAND, Ohio 44106, U.S.A.
a The effects of the inorganic ionic environment, both extra-cellular and intra-cellular, on cell differentiation. *Hydra* spec. *(Hydroidea)*

McLAREN, Miss A. Ph.D. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.

a Induction of super-fecundity by hormone treatment. *Mus musculus (Rodentia)*
b Influence of genotype and early embryonic environment upon development, investigated by in vitro cultivation of early embryos. *Mus musculus (Rodentia)*
c Immunization against spermatozoa, and its effects on female reproductive performance. *Mus musculus (Rodentia)*
d A maternal effect exerted by females homozygous for the recessive gene hairless. *Mus musculus (Rodentia)*
e Blastocyst-uterine interactions during the early stages of implantation, and during physiological and experimental delay of implantation. *Mus musculus (Rodentia)*

MACMILLAN, E. W. Dr. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL 3, England
a The rate of transport of spermatozoa through the ductus epididymidis. *(Mammalia)*

McNUTT, C. W. Ph.D., Prof. — Dept. of Anat., The Univ. of Texas Med. School at San Antonio, 7703 Floyd Curl Drive, SAN ANTONIO, Tex. 78229, U.S.A.
a Developmental genetics of a tail-labyrinthine mutant *(pr.) Mus musculus (Rodentia)*
b Development and pathological progression of a new neuromuscular mutant. *Mus musculus (Rodentia)*

MACOTTA, V. M.D. — Dept. of Anat., Univ. of Turin, Corso M.D'Azeglio 52, 10126 TORINO, Italy
a Growth in vitro of adrenergic neurons

MacRAE, Mrs. E. J. KRUGELIS Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO, Ill. 60612, U.S.A.
a Electron microscopy. *Dugesia tigrina, Notoplana acticola (Turbellaria)*
b Histones in erythropoiesis. *Gallus domesticus (Aves), Oryctolagus cuniculus (Lagomorpha)*

McWHINNIE, Miss D. J. Ph.D. — Dept. of Biol., Sci., De Paul Univ., 1036 W.Belden Ave., CHICAGO, Ill. 60614, U.S.A.
a Biochemical studies on embryonic bone with particular reference to metabolic pathways, enzyme systems, and hormone effects. *Gallus domesticus (Aves), Rana pipiens (Anura)*

MADERSON, P. F. A. Ph.D. — Dept. of Biol., Brooklyn Coll., Bedford Ave. & Ave. H, NEW YORK, Brooklyn, N.Y. 11210, U.S.A.
a Influence of environmental factors and hormones on epidermal turn-over, in vitro and in vivo. *Iguana iguana, Anolis carolinensis, Dipsosaurus dorsalis, Gekko gecko, Coleonyx variegatus (Lacertilia), Elaphe obsoleta (Ophidia)*
b Wound healing. *Iguana iguana, Anolis carolinensis, Dipsosaurus dorsalis, Gekko gecko, Coleonyx variegatus (Lacertilia), Elaphe obsoleta (Ophidia)*
c Tail regeneration with reference to epidermal replacement. *Iguana iguana, Anolis carolinensis, Dipsosaurus dorsalis, Gekko gecko, Coleonyx variegatus (Lacertilia)*

MADJEREK, Z. S. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Experimental studies on genito-urinary tract development. *Mus* spec. *(Rodentia)*

MAEDA (KIBATA), Mrs. M. B.Sc. — Dept. of Biol., Coll. of Gen. Educ., Osaka Univ., Toyonaka, OSAKA, 560 Japan
a Effect of light on morphogenesis. *Chara* spec., *Nitella* spec. *(Characeae)*
b Effects of far-red and red illumination on seed germination. *Lactuca sativa (Compositae, Angiospermae)*

MAGGIO, Miss R. Ph.D., Prof. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
a Activation of ribosomes at fertilization. *Paracentrotus lividus (Echinoidea)*

MAHOWALD, A. P. Ph.D. — Dept. of Biol., Marquette Univ., 530 North 15th St., MILWAUKEE, Wis. 53233, U.S.A.
a Ultrastructure of embryos: wild-type and genetic mutants. *Drosophila melanogaster, D. hydei, D. virilis, D. immigrans, D. willistoni (Diptera)*
b Polar granule morphology and function. *Drosophila melanogaster, D. hydei, D. virilis, D. immigrans, D. willistoni (Diptera)*
c Ultrastructural changes during oogenesis; differentiation of organelles. *Drosophila melanogaster, D. hydei, D. virilis, D. immigrans, D. willistoni (Diptera)*
d Fine structure and cytochemistry of chromatin. *Drosophila melanogaster, D. hydei, D. virilis, D. immigrans, D. willistoni (Diptera)*
e Intercellular migration of centrioles in oogenesis. *Drosophila melanogaster (Diptera)*
f Fine structure of oogenesis and early development. *Miastor* spec. *(Diptera)*

MAISONHAUTE, Cl. — Lab. de Zool., Fac. des Sci., Univ. de Paris, 91 ORSAY, France
a Experimental study of synchrony of mitosis in early embryogenesis. *Leptinotarsa decemlineata (Coleoptera)*

MAJORCA (MONTELEONE), Mrs. A. D.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a Heterospecific andromerogones. *(Amphibia)*
b Regeneration of the testes. *(Anura)*
c The sex of hybrids. *Bufo vulgaris* x *B. viridis (Anura)*

MAKHYA, Miss S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India

MÄKINEN (LÖNNBERG), Mrs. P.-L. M.S. — Dept. of Forensic Med., Univ. of Turku, Kiinamyllynkatu 10, TURKU 3, Finland
a Biochemical characterization of enzymes appearing in early wound healing. *Rattus* spec., *Cavia* spec. *(Rodentia)* (in collaboration with J. RAEKALLIO)
b Histochemical studies on bone regeneration (fracture healing). *Rattus* spec., *Cavia* spec. *(Rodentia)* (in collaboration with J. RAEKALLIO)

MAKINO, S. D.Sc., Prof. — Anim. Chromosomes Research Unit, Fac. of Sci., Hokkaido Univ., North 10, West 8, SAPPORO, 060 Japan
a Chromosome aberrations in patients with congenital disorders, with special regard to the relationship between karyological features and disease states. *Homo sapiens (Primates)*
b Chromosome studies in spontaneous and induced abortions. *Homo sapiens (Primates)*
c Virus-induced chromosome aberrations with special regard to teratogenesis and carcinogenesis. *Homo sapiens (Primates)*

MAKINODAN, T. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a Ontogeny and senescence of the immune system. *Gallus gallus (Aves), Mus musculus (Rodentia)*

MALET, P. M.D. — Lab. d'Histol.-Embryol., Fac. de Méd., Bd. Winston Churchill, B.P. 38, 63 CLERMONT-FERRAND, France
a Cytology of neonatal liver; differentiation of intercellular junctions, characters of microbodies; histochemical differentiation. *Mus musculus (Rodentia)* (in collaboration with R. POURHADI and J. P. TURCHINI)

MALIKOVA, Mrs. I. G. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.
a Larval regeneration. *Harmothoe imbricata, Eteone longa (Polychaeta)*

MALIOVANOVA, Mrs. S. D. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Regeneration of myocardium. *Oryctolagus cuniculus (Lagomorpha)*

MALONE, T. E. Ph.D., Prof. — Biol. Dept., American Univ. of Beirut, BEIRUT, Lebanon
a Cytological and cytochemical studies of oocyte development with special reference to vitellogenesis and nuclear-cytoplasmic relationships. *Blennius cristatus* and other spp. *(Blenniidae, Teleostei)*
b Cytological, cytochemical, and ultrastructural studies of the oocyte envelope. *Blennius cristatus, B. sanguinolentus (Blenniidae, Teleostei)*

MALPOIX (HIGGINS), Mrs. P. M. Ph.D. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium
a Comparative study of the synthesis of nuclear (chromatin) and cytoplasmic protein in embryonic liver in vitro (tissue culture, cell suspension), under the influence of erythropoietin and other hormones. *Mus musculus (Rodentia)*

MALYUK, V. I. Cand.med.sci. — Dept. of Cytol. and Histogenesis, Inst. of Zool., Acad. of Sci. of the Ukraine, Vladimirskaya St. 55, KIEV 30, U.S.S.R.
a Principles of genesis, and cytological peculiarities of some derivatives of mesenchyme: histogenesis of blood vessels. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*
b The development of cellular and fibrillar structures of the vascular wall in ontogenesis. *(Mammalia)*

MANCINO, G. Dr.Biol.Sci. — Ist. di Zool. e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy
a Development and functionality of the gonads in hybrids. *(Urodela)*
b Lampbrush chromosomes. *(Urodela)*
c Cytology. *(Hirudinea, Annelida), (Opisthobranchia, Gastropoda)*

MANCUSO, V. D.Sc., Prof. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a The distribution of enzymes and other substances in the germ during development. *(Invertebrata)*
b Ultrastructure of eggs during development. *(Invertebrata)*
c Ultrastructural changes during oogenesis. *(Invertebrata)*

MANDARON, P. M. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

MANELLI, H. Dr.Nat.Hist., Dr.Biol.Sci. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italy
a Growth and differentiation of blood islands in vivo and in vitro. *Gallus domesticus (Aves)* (in collaboration with L. MASTROLIA)
b Growth and differentiation in regeneration. *Planaria* spec. *(Turbellaria)* (in collaboration with P. PASQUINI)
c Differentiation and developmental correlations between hypophysis, adrenals and gonads (in vivo and in vitro). *Gallus domesticus (Aves)*
d Induced polyspermy. *Paracentrotus lividus (Echinoidea)*

MANFREDI ROMANINI, Mrs. M. G. Ph.D., Prof. — Inst. of Histol. and Embryol., Univ. of Pavia, Piazza Botta 10, 27100 PAVIA, Italy

a Histochemistry and enzymology of yolk sac and other membranes. *Scyllium canicula (Selachii), Salmo irideus (Teleostei), Gallus domesticus (Aves)*
b Functional differentiation of larval gastric epithelium (manicotto ghiandolare di Ruffini) *Rana esculenta (Anura)*

MANGIA, F. Dr.Biol.Sci. — Ist. di Zool. dell'Univ., Via Regina Elena 324, (al policlinico), ROMA, Italy
a Embryonic erythropoiesis. *Xenopus laevis (Anura)*

MANN, T. M.D., Ph.D., D.Sc. — A.R.C. Unit of Reprod. Physiol. & Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England
a Biochemistry of semen. *(Mammalia)*
b Biochemistry of the male reproductive organs. *(Mammalia)*
c Comparative biochemistry of reproduction. *(Mollusca; Elasmobranchii),* various large domestic, small laboratory and wild animals *(Mammalia)*

MANNER, H. W. Ph.D., Prof. — Dept. of Biol., Saint Louis Univ., 1402 South Grand Blvd., ST. LOUIS, Mo. 63104, U.S.A.
a Organogenesis of carpals in regenerating forelimbs. *Triturus viridescens (Urodela)*
b The role of the radius in carpal formation in regenerating forelimbs. *Ambystoma opacum (Urodela)*
c Developmental biology. *Coturnix coturnix japonica (Aves)*
d Factors influencing variability in developmental pattern. *Coturnix coturnix japonica (Aves)*
e The action of developmental genes in the pre-neurula embryo. *Rana pipiens (Anura)*
f The role of the endocrines in regenerating metamorphic animals. *Triturus viridescens (Urodela)*

MANSUETO (BONACCORSO), Mrs. C. Dr.nat.sci. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a Investigations on development by use of radio-isotopes. *(Ascidiae)*
b Incorporation of marked amino acids in nucleated and non-nucleated fragments of unfertilized eggs and oocytes. *(Ascidiae)*
c The action of cystein on development. *Discoglossus pictus (Anura)*
d An analysis of the test cells in the oocytes and during embryonic development. *(Ascidae)*

MANUILOVA, Mrs. N. A. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

MANUKHIN, B. N. Dr.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Catecholamines and their receptors in embryonic development. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

MANZOLI, F. A. M.D. — Inst. of Histol. and Gen. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italy

MANZOLI (GUIDOTTI), Mrs. L. M.D. — Inst. of Histol. and Gen. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italy

MARAUD, R. Dr.en Méd., Dr.ès Sci., Prof. — Lab. de Biol., Fac. de Méd., Univ. de Bordeaux, 33 BORDEAUX, France
a Différenciation sexuelle. *(Vertebrata)*
b Physiologie de la thyroide embryonnaire. *(Vertebrata)*

MARCEL, R. — Lab. de Zool., Fac. des Sci., B.P. 36, 59-LILLE-Distribution, France
a Etude in vivo et in vitro de la morphogenèse au cours du développement et de la régénération. *Sabella pavonina, Sabellaria spinulosa, Nereis diversicolor, Syllis amica, Eisenia foetida (Annelida)*

MARCHAND, C. R. Lic.ès Sci. — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France
a Evolution histophysiologique de l'appareil reproducteur au cours de l'ontogenèse chez des hybrides stériles. *Cairina moschata* x *Anas platyrhynchos (Aves)* (en collaboration avec L. GOMOT)

MARCHISIO, P. C. M.D. — Dept. of Anat., Inst. of Histol. and gen. Embriol., Univ. of Turin, Corso M.D'Azeglio 52, 10126 TORINO, Italy
a Chromatographic and electrophoretic studies of proteins in the optic lobes of eye deprived animals during pre- and postnatal development. *Gallus domesticus (Aves)*
b The biochemical factors involved in the control of optic centre differentiation, with special attention to the role of retinal fibres (experimental investigation). *Gallus domesticus (Aves)*

MARCHOK, Miss A. Ph.D. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn. 06268, U.S.A.

MARGALITH, I. — Dept. of Entomol. and Venomous Anim., The Hebrew Univ., JERUSALEM, Israel

MARGOLIS, G. M.D., Prof. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.
a Virus-cell interaction, replication and differentiation. *Cricetus auratus, Rattus natalensis, R. norvegicus, Mus musculus (Rodentia), Felis domestica, Mustela putorius furo (Carnivora)*

b Cerebellar hypoplasia induced by postnatal virus infections. *Cricetus auratus, Rattus natalensis, R. norvegicus, Mus musculus (Rodentia), Felis domestica, Mustela putorius furo (Carnivora)*
c Hydrocephalus induced by postnatal virus infections. *Cricetus auratus, Rattus norvegicus, Mus musculus (Rodentia)*

MARIANO, Miss M. I. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina
a Nuclear transplantation (early stages until neurulation). *Bufo arenarum (Anura)*

MARIN (LEWIN), Mrs. L. Dr.ès Sci. — Lab. d'Embryol. expér. du Coll. de France et du C.N.R.S., 11 Place M. Berthelot, PARIS Ve, France •
a Organogenèse de l'estomac et du poumon: étude des substances morphogènes élaborées par les mésenchymes inducteurs. *Gallus gallus (Aves)*
b Mise au point d'une technique de culture organotypique des blastèmes de régénération. *Ambystoma mexicanum (Urodela)*
c Morphogenèse du poumon: 1. déterminisme de l'apparition des ébauches (dissociation et réassociation, culture suivie de greffe). 2. moment d'apparition des structures spécifiques des cellules de l'épithélium (ultrastructure). 3. influence de mésenchymes hétérologues sur l'ultrastructure de l'épithélium (ultrastructure). *Gallus gallus (Aves)*. (en collaboration avec Miss F. DAMERON)

MARIN-PADILLA, M. M.D. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

MARINI, Miss M. Dr.Biol.Sci. — Ist. di Anat. Comp., Univ. di Modena, Via Berengario 14, 41100 MODENA, Italy
a Growth and differentiation of the subcommissural organ. *(Amphibia)*
b The differentiation of Rohon-Beard cells in normal development and in regeneration of the nervous system. *(Amphibia)*
c The glycogen pattern in the developing nervous system. *(Amphibia)*

MARINKOVIČ, D. B.Sc. — Inst. of Nucl. Sci. "Boris Kidrich", BEOGRAD, Yugoslavia

MARINKOVICH, V. A. M.D. — Dept. of Pediat., School of Med., Stanford Univ., 300 Pasteur Drive, PALO ALTO, Calif. 94304, U.S.A.
a Developmental immunochemistry. *Gallus gallus (Aves), Oryctolagus cuniculus (Lagomorpha)*
b Immunoglobulins. *Gallus gallus (Aves), Oryctolagus cuniculus (Lagomorpha)*

MARK, R. F. B.S. — Dept. of Physiol., Monash Univ., CLAYTON, Vict. 3168, Australia
a Regenerating motor nerves and reinnervating muscle (descriptive, histochemical, experimental and electrophysiological). *Astronotus ocellatus (Cichlidae), Carassius carassius (Cyprinidae, Teleostei)*

MARKELOVA, Mrs. I. W. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

MARKERT, C. L. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A. •
a Gametogenesis and chromosome behavior. *Rana pipiens (Anura)*
b Gamete maturation, fertilization, and early development. *Mus musculus (Rodentia)*
c Multiplicity of homologous genes. Various spp. *(Pisces)*
d Ontogeny of isozymic patterns of enzymes. *Mus musculus (Rodentia)*, various spp. *(Pisces)*
e Developmental genetics. Various spp. *(Pisces)*

MARKMAN, B. Fil.lic. — Dept. of Zoophysiol., Univ. of Gothenborg, GÖTEBORG, Sweden

MARKOVA, Mrs. L. N. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a The use of enzyme preparations for the analysis of the role of acetylcholine and biogenic monoamines in early embryogenesis. *Strongylocentrotus nudus, Patiria pectinifera (Echinoidea)* (in collaboration with G. A. BUZNIKOV)

MAROTTI, G. Dr. — Inst. of Human Anat., Fac. of Med., Univ. of Bari, Policlinico, 70124 BARI, Italy
a Histological and histochemical changes in the developing cornea of diminutive eye bulbs. *Gallus domesticus (Aves)*

MARRARO (CARNAZZA), Mrs. M. L. — Ist. di Anat. Umana Normale, 2ª Cattedra, Via Biblioteca 4, 95124 CATANIA, Italy
a Mode of formation of the concentric bodies (epithelial pearls) during chorioallantoic membrane grafts. *Gallus domesticus (Aves)*
b A new method of graft in chorioallantoic membrane. *Gallus domesticus (Aves)*
c Liver homoplastic graft in chorioallantoic membrane. *Gallus domesticus (Aves)*

MARRÈ, E. — Ist. di Sci. Botaniche dell'Univ., Cat. di Fisiol. Vegetale, Via Giuseppe Colombo 60, 20133 MILANO, Italy •

MARSK, L. M.D. — Lab. of Teratol., Karolinska Inst., S-104 01 STOCKHOLM 60, Sweden
a Perinatal vascular changes in the digestive system. *Rattus norvegicus (Rodentia)*

MARSLAND, D. A., Ph.D., Prof. — Marine Biol. Lab., Box 665, WOODS HOLE, Mass. 02543, U.S.A.

a Disintegration of mitotic spindle of dividing eggs on application of high hydrostatic pressure. *Arbacia punctulata (Echinoidea)*
b Stabilization of the mitotic structures by heavy water (D_2O). *(Echinoidea)*
c Re-inforcement of the anti-mitotic effects of colchicine by high pressure in dividing eggs. *Lytechinus variegatus (Echinoidea)*
d A temperature analysis of how pressure reverses the anti-mitotic effects of heavy water in the dividing egg. *Arbacia punctulata (Echinoidea)*
e Stability of microtubules in sperm cells exposed to high (10,000 psi) hydrostatic pressure. *Arbacia punctulata (Echinoidea), Libinia emarginata, Homarus vulgaris (Decapoda)*
f Factors concerned with the initiation of cytoplasmic division following nuclear division. in cleavage. *Arbacia punctulata (Echinoidea).*
g Effects of relatively low (1,000-4,000 psi) pressures on the early development (egg to pluteus stage). *Arbacia punctulata (Echinoidea)*

MARSTON, J. H. Ph.D., M.R.C.V.S. — Physiol. Lab., Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3EG, England
a Pre-implantation development: the physiology of implantation. *(Mammalia)*

MARTHY, H.-J. Ph.D. — Lab. Arago, Fac. des Sci. de Paris, 66 BANYULS-sur-MER, France
— untill springtime 1970: Coll. de France, Lab. d'Embryol. Expér., 49 bis Av. de la Belle Gabrielle, 94 NOGENT-sur-MARNE, France
a In vitro culture of embryos and embryo-fragments. *Loligo vulgaris (Cephalopoda)*
b Implantation and explantation of organ anlagen. *Loligo vulgaris (Cephalopoda)*
c Investigations on induction. *Loligo vulgaris (Cephalopoda)*

MARTIN, A. H. Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.
a Development and morphology of the central nervous system studied by light microscopy. *(Vertebrata)*
b Teratogenic effect of various techniques and agents upon the developing embryo. *(Vertebrata)*

MARTIN, C. B., Jr. M.D., Prof. — Dept. of Obstet. and Gynecol., Med. Coll. of Georgia, Eugene Talmadge Mem. Hosp., AUGUSTA, Ga. 30902, U.S.A.
a Anatomical and radiological studies of placental circulation. *Macaca mulatta, Homo sapiens (Primates)*
b Physiological studies of the uteroplacental and umbilical circulations. *Macaca mulatta (Primates)*

MARTIN (FORGET), Mrs. C. S. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
a Etude des effets tératogènes obtenus par le paramino benzène sulfamide. *Gallus gallus (Aves)*
b Mesonephros differentiation: culture of Wolffian duct with different mesenchymes. *Gallus domesticus (Aves)*

MARTIN, R. P. Dipl.d'Etud.Approf. — Biol. et Ecol., Univ. de Caen, 14 CAEN, France
a Renouvellement et différenciation des cellules de l'épithélium intestinal. *Ambystoma mexicanum (Urodela)*

MARTÍNEK, J. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a Cytochemistry and electron microscopy of eggs. *Mus rattus (Rodentia), Homo sapiens (Primates)*
b The fine structure of the blastocyst. The role of nucleoli in early differentiation of blastodermic vesicle. *Mus rattus (Rodentia), Homo sapiens (Primates)*

MARTINET, Mrs. M. Dr.ès Sci. Sci. — Lab. d'Histol.-Embryol. B., Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France
a Influence tératogène des infections rickettsiennnes. *Mus rattus (Rodentia)*

MARTINOVIC, J. V. B.Sc. — Inst. of Nucl. Sci. "Boris Kidrich", BEOGRAD, Yugoslavia

MARTINOVITCH, P. N. Ph.D. — Dept. of Exper. Histol. and Organ Cult., Inst. of Nuclear Sci. "Boris Kidric", Vinča, P.O. Box 522, BEOGRAD, Yugoslavia •
a The effect of injecting testicular DNA from a strain with colored feathers into embryos of a pure white strain. *Gallus domesticus (Aves)*

MARTY, R. J. L. Dr.en Méd., Dr.ès Sci., Prof. — Lab. de Neurophysiol., Fac. des Sci., Univ. de Montpellier, Place Eugène Bataillon, 34 MONTPELLIER, France
a Neurophysiologie. 1. Maturation péri-natale du système auditif (stimulation électrique de la cochlée; stimulation tonale). 2. Maturation post-natale du système vestibulaire. *Felis catus (Carnivora)*
b Neuroanatomie. 1. Développement du thalamus (étude radio-autographique). 2. Maturation péri-natale du cortex cérébral. *Rattus norvegicus, Felis catus (Mammalia)*

MARUOKA, S. M.Sc. — Lab. of Embryol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
a Mechanism of action of sex hormone. *Mus musculus (Rodentia)*

MARUYAMA, K. D.Sc., Prof. — Biol. Inst., Coll. of Gen. Educ., Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

MASCARENHAS, J. P. Ph.D., Prof. — Dept. of Biol. Sci., State Univ. of New York at Albany, ALBANY, N.Y. 12203, U.S.A.
a Protein and RNA synthesis in the control of pollen tube development. *Tradescantia paludosa (Commelinaceae)*
MASLOW, D. E. Ph.D. — Dept. of Exper. Pathol., Roswell Park Mem. Inst., BUFFALO, N.Y. 14203, U.S.A.
a Formation of cytochimeric striated muscle from disaggregated embryonic cells of different classes and tissues. *Gallus domesticus (Aves), Mus* spec. *(Rodentia)*
b The effect of changes in the cell periphery caused by enzymatic treatments as determined by electrophoretic mobility on the formation of aggregates of disaggregated embryonic cells of different tissue origins. *Gallus domesticus (Aves)*
MASNER, P. RNDr., CSc. — Dept. of Developm. Morphol., Inst. of Entomol., Czech. Acad. of Sci., 7 Viničná, PRAHA 2, Czechoslovakia
— till Sept. 1970: Zoecon Corp. for Appl. Insect Hormone Research, Biol. Branch, 975 California Ave., PALO ALTO, Calif. 94304, U.S.A.
a Endocrine regulation of gonad morphogenesis during postembryonic and imaginal development, using synthetic analogues of these hormones, spec. of the juvenile hormone (cytological, histological and histochemical techniques). *Pyrrhocoris apterus (Heteroptera)*
MASON, J. Ph.D. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49 bis Ave. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
a Nutritional aspects of organotypic cancer culture
b Embryonic antigens in tumors
MASSART, C. M.D., Prof. — Ist. di Anat. e Istoembriol., Univ. di Pisa, Via Roma 55, 56100 PISA, Italy
MASTERS, C. J. Ph.D., Prof. — Graduate Dept. of Biochem., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.
MASTROLIA, Miss L. Dr.Biol.Sci. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italy
a Growth and differentiation of embryonic adrenal gland in vivo and in vitro. *Gallus domesticus (Aves)*
b Growth and differentiation of blood islands in vivo and in vitro. *Gallus domesticus (Aves)* (in collaboration with H. MANELLI)
MASUDA, H. D.Sc. — Dept. of Biol., Fac. of Sci., Kōnan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan
a Structural changes of embryonic cells during cultivation. *Cynops* spp. *(Urodela), Hynobius* spp., *Rana* spp. *(Anura)*
MASUI, Y. Ph.D., Prof. — Dept. of Zool., Univ. of Toronto, 25 Harbord St., TORONTO 5, Ont., Canada
a Nucleocytoplasmic interaction in oogenesis and early development. *(Amphibia)*
b Analysis of proteins of embryonic cells. *(Amphibia)*
c Studies of the induction problem in early development. *(Amphibia)*
MATĚJKA, M. Dr.Med., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia
a The morphogenesis of the genital organs from the standpoint of evolutionary morphology. *(Amniota,* incl. *Homo sapiens)*
b The morphogenesis of the genital organs studied on the basis of experimental embryology. *(Amniota)*
MATHEWS, M. B. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Biophysical and biochemical aspects of connective tissue components
MATHUR, R. S. Ph.D. — Dept. of Zool., Univ. of Rajasthan, JAIPUR, India
MATSUMOTO, J. D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
a Correlation between pigment formation and pteridine pigments during postembryonal stages. *Carassius auratus (Teleostei)*
b Biochemical and morphological properties of the pigment granules of chromatophores in relation to function and differentiation. *Xiphophorus helleri, Carassius auratus (Teleostei)*
MATSUNAGA, Miss Y. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan
a Carbohydrate metabolism of the embryo. *Anthocidaris* spec., *Pseudocentrotus* spec., *Hemicentrotus* spec. *(Echinoidea)*
MATTINGLY, Miss E. Ph.D. — Dept. of Zool., Univ. of Georgia, ATHENS, Ga. 30601, U.S.A.
a Variations in nucleic acid synthesis during larval development (autoradiography and biochemical methods). *Rhynchosciara angelae (Diptera)*
MATTON (VAN LEUVEN), Mrs. M. D. — Dept. of Ophthalmol., Fac. of Med., Univ. Hosp., State Univ. of Gent, De Pintelaan. GENT, Belgium
MATUSZEWSKI, B. Ph.D. — Dept. of Cytol., Fac. of Biol., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a Oogenesis. *(Cecidomyiidae, Diptera)*
b Cytochemical investigation on the origin of the mitotic spindle. *(Cecidomyiidae, Diptera)*

c Development and growth of egg follicles: 1. growth regulation of nurse nuclei. 2. origin of oosome material in the egg cell. *(Cecidomyiidae, Diptera)*

MAUGER (GIRARD), Mrs. A. Dr. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

a Organogenesis of the vertebral column after treatment of gastrulae with lithium chloride and sodium thiocyanate. *Pleurodeles waltlii (Urodela)*

b Microscopic and ultrastructural study of the effects of X-irradiation upon the development of the spinal pteryla and the cutaneous nerve pattern. *Gallus domesticus (Aves)*

c Autoradiographic study of the formation of the skin: contribution of various cell types to the dermis and epidermis. *Gallus domesticus (Aves)*

MAURER, M. L. B.A. — Div. of Biol. Sci., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

MAURY (GALLISSIAN), Mrs. M. F. Dipl.d'Etud.Sup.2 — Lab. de Morphogénét. Anim., Fac. des Sci., 1 Place Victor Hugo, 13 MARSEILLE 3, France

a Les problèmes de dédifferenciation et de rédifferenciation cellulaire. (Marine *Porifera)*

MAY CHING, T. Dr. — Agronomy Dept., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.

a Physiology of seed development. *(Angiospermae)*

MAYER, T. C. Ph.D., Prof. — Dept. of Biol., Fac. of Liberal Arts and Sci., Rider Coll., TRENTON, N.J. 08602, U.S.A.

MAZHUGA. P. M. Dr.biol.sci. — Dept. of Cytol. and Histogenesis, Inst. of Zool., Acad. of Sci. of the Ukraine, Vladimirskaya St. 55, KIEV 30, U.S.S.R.

a Principles of genesis, and cytological peculiarities of some derivatives of mesenchyme: the peculiarities of endochondral and perichondral osteogenesis. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*

b Onto- and phylogenesis of the blood-vascular trunks of the extremities. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*

c The development of the blood-vascular bed of the joint capsule. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*

d Histogenesis of blood vessels; comparative hemopoiesis. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*

e The structural and functional differentiation of cells in chondrogenesis and osteogenesis. *(Mammalia)*

MAZURKIEWICZ, M. M.S. — Ira C. Darling Center for Research, (Marine Lab.), Univ. of Maine, WALPOLE, Me. 04573, U.S.A.

a Development from the egg through F_2 generation. *Laonereis culveri (Errantia, Polychaeta)*

b Larval development and reproduction. *Hydrobia totteni, H. salsa (Prosobranchia, Gastropoda)*

c Larval development. *Macoma balthica (Lamellibranchia)*

MAZZA, M. Dr.Nat.Sci. — Ist. di Zool. e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy

a External egg morphology, development. *Nepa rubra (Heteroptera, Hemiptera)*

MECKLENBURG, C. L. F. C. von Fil.lic. — Zootom. Dept., Zool. Inst., Univ. of Lund, Helgonavägen 3, S-223 62 LUND, Sweden

MEDAWAR, Sir P. B. D.Sc. — Natl. Inst. for Med. Research, Mill Hill, LONDON N.W.7, England

MELANDER, Y. Ph.D. — Inst. of Genet., Univ. of Lund, Sölvegatan 29, 223 62 LUND, Sweden

a Behaviour of chromosomes in relation to cell differentiation during embryogenesis; studies of living (cinematography) and fixed cells. *(Planariidae, Turbellaria), Tomopteris helgolandica (Polychaeta), Calliphora erythrocephala (Diptera), (Mammalia)*

MELLINGER, J. Dr.ès Sci. — Lab. de Zool. et d'Embryol. Expér., Univ. de Strasbourg, 12 rue de l'Université, STRASBOURG, France

MELTON, Ch. G., Jr. Ph.D. — Dept. of Biol., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.

a Messenger RNA ontogeny in embryonic development. *Rana pipiens (Anura)*

MENGE, A. C. Ph.D., Prof. — Dept. of Obstet. and Gynecol., Center for Research in Reprod. Biol., Univ. of Michigan Med. Center, ANN ARBOR, Mich. 48104, U.S.A.

a Effects of immune reactions against spermatozoa on the development of embryos. *Oryctolagus cuniculus (Lagomorpha)*

MENKES, B. Dr.med., Prof. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania

a The role of normal and experimentally induced necrosis in teratogenesis

b Cinematographical studies on growth and differentiation processes of the embryonic axial organs. *Gallus domesticus (Aves)*

c The influence of exogenous factors on embryonic development; prenatal pathology. *Gallus domesticus (Aves)*

d Organogenesis in the embryo. *Homo sapiens (Primates)*

e Synthetic study on a collection of serial preparations of 3-30 mm embryos. *Homo sapiens (Primates)*

MENSCHIK, Z. M.D., D.Sc., Prof. — Dept. of Anat., Georgetown Univ., 3900 Reservoir Rd., N.W., WASHINGTON, D.C. 20007, U.S.A.

MERCIER (PAROT), Mrs. L. Dr.ès Sci. — Lab. d'Histol.-Embryol.A, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France

a Tératogenèse par sulfamides hypoglycémiants, antimetabolites. *Rattus* spec. *(Rodentia)* (en collaboration avec H. TUCHMANN-DUPLESSIS)

b Influence de la cortisone sur la gestation et le développement foetal. *Rattus* spec. *(Rodentia)*

c Influence des alcaloides du Rauwolfia, de la réserpine et de la déserpidine, sur le développement. *Rattus* spec. *(Rodentia)* (en collaboration avec H. TUCHMANN-DUPLESSIS)

d Influence des neuroleptiques sur les malformations congénitales. *Rattus* spec., *Mus* spec., *(Rodentia), Oryctolagus cuniculus (Lagomorpha)*

e Diabète expérimental et grossesse. *(Mammalia)*

f Influence des antimitotiques sur la gestation. *(Rodentia)* (en collaboration avec H. TUCHMANN-DUPLESSIS)

MERKER, H.-J. Dr.med. — Forschungsabt. für Elektronenmikroskopie und II. Anat. Inst. der Freien Univ. Berlin, Kön.-Luise-Str. 15, 1 BERLIN 33, W.Germany

MERKLE, U. Dr.med., Prof. — Anat. Inst. der Univ. Erlangen-Nürnberg, Krankenhausstrasse, 852 ERLANGEN, W.Germany

a Spermatogenese und Sertoli-Zellen. *Rattus* spec. *(Rodentia)*

MERTZ, M. Dr.med. — Anat. Inst. der Univ., Österbergstr. 3, 74 TÜBINGEN W.Germany

MESSAGE, M. A. Ph.D. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England

a Development of muscle, primarily with histochemical techniques. *Xenopus laevis (Anura), Mus musculus, Rattus norvegicus (Rodentia)*

MESTRINER, M. — Dept. of Genet., Univ. of São Paulo, P.O. Box 301, RIBEIRÃO PRÊTO, S.P., Brazil

METZ, C. B. Ph.D. — Inst. of Molec. Evolut., Univ. of Miami, 521 Anastasia Ave., CORAL GABLES, Fla. 33124, U.S.A. •

MEUSY, J.-J. D.E.S. — Lab. d'Evolut., Fac. des Sci. de Paris, 105 Bd. Raspail, 75 PARIS 6, France

a Corrélations endocrines. *Orchestia gammarella (Amphipoda), Carcinus maenas (Decapoda, Crustacea)*

b Ultrastructure des glandes endocrines. *(Malacostraca, Crustacea)*

MEYER, D. B. Ph.D. — Dept. of Anat., Wayne State Univ., 1400 Chrysler Freeway, DETROIT, Mich. 48207, U.S.A.

a Morphogenesis and developmental histochemistry of embryonic eye. *Gallus domesticus (Aves)*

b Histochemical studies of gonadal development. *Gallus domesticus (Aves)*

c Prenatal ossification of the skeleton. *Homo sapiens (Primates)*

MEYER, G. F. Dr.rer.nat. — Max-Planck Inst. für Biol., Abt. Beermann, Spemann-Str. 34, 74 TÜBINGEN, W.Germany

MEZGER-FREED, Mrs. L. Ph.D. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A.

a Genetics of haploid embryo cell lines including analysis by nuclear transfer. *Rana pipiens (Anura)* (in collaboration with J. FREED)

MICCIARELLI (SBRENNA), Mrs. A. Dr.Biol. — Ist. di Zool., Univ. di Ferrara, Via Previati 24, 44100 FERRARA, Italy

MICHAEL, M. I. Ph.D. — Dept. of Zool., Fac. of Sci., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt, U.A.R.
— temporarily: Zool. Dept., Fac. of Agric. and Vet. Sci., Univ. of Mosul, MOSUL, Iraq

a The development of the olfactory organs. *Bufo regularis (Anura)*

b Experimental analysis of the development of the cephalic ganglia and other derivatives of the head neural crest. *Ambystoma mexicanum (Urodela)*

c The development of the urogenital system. *Bufo regularis (Anura)* (in collaboration with S. N. SEDRA and S. KHALIL)

d Studies on hind limb regeneration. *Bufo regularis (Anura)*

MICHALOWSKI, J. † Ph.D. — Dept. of Gener. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland
(deceased)

MICLEA, Mrs. C. Dr.Biol.Sci. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania

a Effects of cytostatics on embryonic development. *Gallus domesticus (Aves)*

MIDDLETON, C. A. B.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a A study of the locomotion and behaviour of epithelial cells in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)*

MIGLIORINI (BRUSCHELLI), Mrs. G. Dr.Sci.Biol. — Ist. di Biol. Gener., Fac. di Med., Via del Giochetto, 06100 PERUGIA, Italy

a Neurosecrezione durante lo sviluppo embrionale. *Dugesia lugubris (Turbellaria), Allolobophora caliginosa (Oligochaeta)*
b Antibiotici e sviluppo embrionale. *Bufo vulgaris (Anura)*

MIKAMI, Y. Ph.D., M.D., Prof. — Dept. of Anat., School of Med., Mie Pref. Univ., 100, Torii-Cho, TSU, Japan
a Etiology of some congenital anomalies. *Mus molossinus albinus (Rodentia)*
b Developmental mechanism of entodermal organs
c Experimental analysis of Wolffian lens regeneration

MIKAMO, K. D.Sc., Prof. — Lab. d'Embryol. et de Cytogénét., Clin. Univ. de Gynecol. et d'Obstét., 20 rue Alcide Jentzer, 1205 GENÈVE 4, Switzerland
a Sex ratio in fetuses from induced and from spontaneous abortions. *Homo sapiens (Primates)*
b Chromosomes of various fetal stages, normal and pathologic. *Homo sapiens (Primates)*
c Chromosomes and genes in sex-reserved animals. *Xenopus laevis (Anura)*
d Pathological development of the testis (quantitative analysis of spermatogonical deficieny in chromatin-positive Klinefelter syndrome at early postnatal stages). *Homo sapiens (Primates)*
e Degenerative changes in fetal membranes (a histological study in relation to the physiology of onset of labor). *Homo sapiens (Primates)*
f Intrafollicular overripeness of oocytes an an etiologic factor of malformation and nondisjunction of chromosomes with special reference to abnormal chromosomal behavior in meiotic phases. *Xenopus laevis (Anura), Oryctolagus cuniculus (Lagomorpha)*
g Anatomic studies of normal and pathologic embryonic development. *Homo sapiens (Primates)*
h Effects on embryonic development of fertility regulating agents; chromosomal and anatomic studies. *Homo sapiens (Primates)*
i Incidence of sex chromosomal anomalies in newborn infants and the etiology of the anomalies. *Homo sapiens (Primates)*

MIKHAILOVA, Ms. I. G. Dr.biol.sci. — Dept. of Embryol., Murmansky Sea-Biol. Inst., Acad. of Sci., DALNII ZELENZI, U.S.S.R.

MIKI-NOUMURA, Mrs. T. Ph.D. — Inst. of Molec. Biol., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, 464 Japan
a The mitotic apparatus protein of the egg. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus, Anthocidaris crassispina (Echinoidea)*
b Cell division of the egg. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus, Anthocidaris crassispina (Echinoidea)*
c An actin-like egg protein. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus, Anthocidaris crassispina, Temnopleurus toreumatics (Echinoidea)*

MILAIRE, J. M.D. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Univ., 97 rue aux Laines, BRUXELLES, Belgium

MILKMAN, R. D. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Developmental biology, classical and physiological genetics. *Botryllus schlosseri (Stolidobranchia, Tunicata)*
b Developmental biology, genetics. *Drosophila melanogaster* and other spp. *(Diptera)*

MILLER, O. L., Jr. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a The relationship of fine structure to RNA, DNA, and protein metabolism in the lampbrush chromosomes, nucleoli, and nucleoplasm of oocytes (standard sectioning techniques, micromanipulation, enzymatic digestions, phase contrast microscopy, electron microscopy, autoradiography). *(Amphibia)*

MILLER, T. J. Ph.D. — Dept. of Zool., Rutgers Univ., 195 University Ave., NEWARK, N.J. 07102, U.S.A.
a The mechanism of cleft palate formation, elucidated by: 1. possible reduction of incidence, 2. biochemical and histochemical changes, wrought by various teratogens. *Mus musculus (Rodentia)*

MILLINGTON, W. F. Ph.D. — Dept. of Biol., Marquette Univ., 530 North 15th St., MILWAUKEE, Wis. 53233, U.S.A.
a Development at the shoot apex, and regulation of form in the leaf and shoot. *Proserpinaca palustris, Monstera* spp., *Parthenocissus vitacea, Ulex europaeus*
b Development in coenobial forms. *Pediastrum* spp. *(Chlorophyceae)*

MILLONIG, G. M.D. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
a Electron microscopic studies on early development. *Paracentrotus lividus, Arbacia lixula (Echinoidea)*
b Fine structure changes after electric activation. *Paracentrotus lividus, Arbacia lixula (Echinoidea)*
c Electron microscopic histochemistry of alcaline phosphatase during embryogenesis. *Paracentrotus lividus, Arbacia lixula (Echinoidea)*

MILLS, K. S. Ph.D., Prof. — Dept. of Zool., Univ. of Oklahoma, 730 South Oval, Room 222, NORMAN, Okla. 73069, U.S.A.
a Accelerated growth and orientation of tissue culture cells.
MILLS, S. E. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Regulatory mechanisms in cultured cells. *(Plantae)*
MILMAN, L. S. Cand.biol.sci. — Lab. of Developm. Biophys., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.
MINAFRA, S. Dr. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
MINELLI, G. Dr.nat.sci., Prof. — Ist. di Anat. Comp., Univ. di Bologna, Via Belmeloro 8, BOLOGNA (103), Italy
a Nervous system. *(Vertebrata)*
MINGANTI, A. Dr., Prof. — Ist. di Anat. Comp., Univ. di Genova, Via Balbi 5, 16126 GENOVA, Italy •
a Enzyme activities in eggs and embryos. *Balanus* spec., *Lepas* spec. *(Cirripedia, Crustacea)*
MINTZ, Miss B. Ph.D. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A. •
a Gene control of differentiation in allophenic animals with two genotypic populations of cells. *Mus musculus (Rodentia)*
MISENHEIMER, H. R. M.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Anatomical and radiological studies of circulation in the maternal placenta. *Macaca mulatta, Homo sapiens (Primates)* (in collaboration with Miss E. M. RAMSEY)
MITASHOV, V. I. — Lab. of Developm. Cytogenet., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.
MITCHELL, J. T. Ph.D. — Dept. of Anat., State Univ. of New York, 766 Irving Ave., SYRACUSE, N.Y. 13210, U.S.A.
a Effect of chemical compounds on pre-implantation stages in vivo and in vitro, with emphasis on developmental morphology and teratology. *Mus musculus (Rodentia)*
b Studies on the neoplastic conversion of embryo cells cultured in vitro utilizing cytogenetics and histochemical approaches. *Mus musculus (Rodentia)*
MITCHISON, J. M. Sc.D., Prof. — Dept. of Zool., Univ. of Edinburgh, West Mains Rd., EDINBURGH 9, Scotland, U.K.
a Developmental changes during the cell cycle, with special reference to enzyme synthesis. *Schizosaccharomyces pombe (Saccharomycetales)*
MITOLO, V. M.D. — Inst. of Human Anat., Fac. of Med., Univ. of Bari, Policlinico, 70124 BARI, Italy
a Quantitative changes of spinal ganglia and spinal cord after increase of the peripheral field of innervation. *Gallus domesticus (Aves)*
MITRA, B. N. Ph.D. — Cell Research Unit, Dept. of Zool., Univ. of Calcutta, 35 Ballygunje Circular Rd., CALCUTTA-19, India
MITRA, J. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India
MITRA, Miss T. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India
MIYA, K. D.Sc., Prof. — Inst. of Appl. Entomol., Fac. of Agric., Iwata Univ., Ueda 3-18, MORIOKA, Japan
MIYAHARA, E. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812, Japan
a Regulation of ribosomal RNA synthesis during embryonic development. *Xenopus laevis (Anura)*
MIZELL, M. Ph.D., Prof. — Dept. of Biol., Tulane Univ., NEW ORLEANS, La. 70118, U.S.A.
a Induced limb regeneration. *Didelphis virginiana (Marsupialia)*
b Effects of regenerating appendages on Lucké tumor (renal adenocarcinoma): tumor differentiation. *Rana pipiens (Anura)*
c Infectious nucleic acids (Herpes type virus associated with Lucké tumor) as differentiating agents. *Rana pipiens (Anura)*
MIZUNO, T. Dr., Prof. — Lab. of Anim. Nutr., Fac. of Agric., Kobe Univ., 1 Rokkodai-cho, Nada-ku, KOBE, Japan
a Biochemical studies on the change from proliferation to cell enlargement in embryonic muscle cells. *Gallus domesticus (Aves)*
MOAV, B. Ph.D. — Dept. of Zool., Tel-Aviv Univ., 155 Herzl St., TEL-AVIV, Israel
a Histone synthesis in eggs. *(Echinoidea)*
MOCHIDA, O. B.Agr. — Dept. of Plant Pathol. & Entomol., Kyushu Natl. Agric. Exper. Station, Nishi 496, Izumi, CHIKUGO-shi, Fukuoka-ken, 833 Japan
a Morphological and physiological studies on oogenesis. *Nilaparvata lugens (Delphacidae, Homoptera)*
b Ecological and anatomical studies on reproduction. *Javesella pellucida (Delphacidae, Homoptera)*

MODAK, S. P. Dr.ès Sci.Biol. — Depts. of Microbiol. and Biochem., Med. Center, Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.

a Studies on lens induction. *Gallus domesticus (Aves)*

b Cellular replication during development and growth of lens. *Gallus domesticus (Aves)* (in collaboration with Miss B. J. PERSONS)

c Nuclear degeneration during the terminal lens fiber cell differentiation in developing lens; histological and microspectrophotometric analysis. *Gallus domesticus (Aves)* (in collaboration with Mrs. S. PERDUE)

d Analysis of the template activity of DNA during the terminal lens cell differentiation. *Gallus domesticus (Aves)* (in collaboration with F. J. BOLLUM and R. C. von BORSTEL)

e Analysis of the primer activity of DNA during the terminal lens cell differentiation. *Gallus domesticus (Aves)* (in collaboration with F. J. BOLLUM)

f Temporal and spatial patterns of cell replication and nuclear degeneration during lens development and growth; computer analysis of mathematical models. *Gallus domesticus (Aves)* (in collaboration with V. R. R. UPPULURI and W. E. LEVER)

g Analysis of the physico-chemical properties of DNA in differentiating cells. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus musculus, Rattus rattus (Rodentia), Homo sapiens (Primates)* (in collaboration with F. J. BOLLUM, J. SISKEN, Miss G. DONNELLY, S. KARASAKI and H. TRAURIG)

h The pattern of RNA synthesis during lens development. *Gallus domesticus (Aves)* (in collaboration with Miss B. J. PERSONS)

MOE, H. M.D., Prof. — Dept. of Anat., Univ. of Copenhagen, 63 Nörre Alle, COPENHAGEN Ø, Denmark

MOFFAT, D. B. M.D. — Dept. of Anat., Univ. Coll. of S. Wales & Monmouthshire, Newport Rd., CARDIFF, Wales, U.K.
(no embryological work in progress)

MOHLER, J. D. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a The action of different genes which affect a quantitative character (crossveinlessness) as modifiers of developmental responses (phenocopies) to heat shock at early pupal stages. *Drosophila melanogaster (Diptera)*

MOHRI, H. D.Sc., Prof. — Biol. Inst., Coll. of Gen. Educ., Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

MOLD, Miss K. M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary

a Teratogenesis. *Gallus domesticus (Aves), Rattus rattus (Rodentia)*

MOLINARO, M. M.D. — Ist. di Istol. ed Embriol. Gener., Univ. di Roma, ROMA, Italy

a Macromolecular synthesis in the early development of the embryo. *Mus musculus (Rodentia)*

b Heterogeneity of tRNA during embryonic development. *Paracentrotus lividus (Echinoidea)*

MOLLENHAUER, H. H. Ph.D. — Charles F. Kettering Research Labs., 150 E. South College St., YELLOW SPRINGS, Ohio 45387, U.S.A.

a Study of ultrastructural changes during development and germination of the embryo. *Zea mays*

MOMENT, G. B. Ph.D., Prof. — Dept. of Biol., Goucher Coll., BALTIMORE, Md. 21204, U.S.A.

MONESI, V. M.D., Prof. — Ist. di Istol. ed Embriol. Gener., Univ. di Roma, ROMA, Italy

a Spermatogenesis and cell differentiation. *Mus musculus (Rodentia)*

b Role of histones in cell differentiation and cell function (autoradiography and biochemistry). *Mus musculus (Rodentia)*

c Molecular mechanisms of early embryonic development from fertilization to blastulation. *Mus musculus (Rodentia)*

MONIE, I. W. M.B., Ch.B., Prof. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.

a Morphological, histochemical and organ culture studies on congenital malformations of the cardiovascular, urogenital, and nervous systems induced by teratogenic agents. *Rattus rattus (Rodentia)*

MONNICKENDAM, Miss M. A. M.Sc. — School of Biol. Sci., Univ. of East Anglia, Wilberforce Rd., NORWICH, NOR 88C, England

a Nuclear-cytoplasmic interaction in early development. *Xenopus laevis (Anura)*

b Control of cell division. *Xenopus laevis (Anura)*

MONROY, A. M.D., Prof. — Lab. of Molec. Embryol., Via Toiano 2, 80072 ARCO FELICE, Napoli, Italy

a Protein synthesis during development. *(Echinoidea)*

MONTERO, C. M.D. — Dept. de Anat., Cat. de Anat. II, Fac. de Med., CADIZ, Spain

MONTERO, E. Med.Dr. — Inst. F. Olóriz, Fac. de Med., Univ. de Granada, GRANADA, Spain

MOOG, Miss F. Ph.D., Prof. — Dept. of Biol., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.

a Development of enzyme systems in the embryo. *Gallus domesticus (Aves), (Mammalia)*
b Role of the pituitary-adrenal axis in fetal and juvenile development. *(Aves; Mammalia)*
c Chromotographic, electrophoretic and immunochemical studies of the nature of the alkaline phosphatases of the small intestine, fetal to mature stages. *Mus musculus (Rodentia)*

MOOKERJEE, Mrs. A. Ph.D.. — Dept of Zool., Presidency Coll., CALCUTTA-12, W. Bengal, India

MOOKERJEE, S. Ph.D., Prof. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W. Bengal, India •

MOOR, R. M. B.Sc. — A.R.C. Unit of Reprod. Physiol & Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England
a The physiological relationship between the early stages of embryonic development, the uterus and the corpus luteum. *Ovis aries, Bos taurus, Sus scrofa (Artiodactyla)*

MOORE, Mrs. B. C. Ph.D. — Dept. of Life Sci., Univ. of California, RIVERSIDE, Calif. 92502, U.S.A. •
a Chromosomal analysis of lethal racial hybrid embryos. *Rana pipiens (Anura)*

MOORE, J. A. Ph.D., Prof. — Dept. of Life Sci., Univ. of California, RIVERSIDE, Calif. 92502, U.S.A. •
a Development of diploid and haploid racial hybrids. *Rana pipiens (Anura)*

MOORE, W. J. Ph.D. — Dept. of Oral Pathol., The Dental School, St. Mary's Row, BIRMINGHAM 3, England

MOORES, G. R. B.Sc. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a Surface properties and behaviour of embryonic cells. *Gallus gallus (Aves)*

MORAÏTOU (APOSTOLOPOULOU), Mrs. M. Ph.D. — Zool. Lab. and Museum, Fac. of Sci., Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece

MORATA, G. M.Sc. — Sect. Developm. Genet., Inst. of Genet. and Anthropol., Velazquez 144, MADRID 6, Spain
a Kinetics of DNA replication during the mitotic cycle in imaginal disc cells. *Drosophila melanogaster (Diptera)*
b Study of the development fate of chromosome rearrangements following somatic recombination. *Drosophila melanogaster (Diptera)*

MOREAU, R. — Lab. de Physiol. Génér., Fac. des Sci. de Bordeaux, Avenue des Facultés, 33 TALENCE, France
a Métabolisme du développement (mues-metamorphose-diapause). *Pieris brassicae (Lepidoptera)*

MORETTI, R. L. Ph.D. — Dept. of Life Sci., Univ. of California, RIVERSIDE, Calif. 92502, U.S.A.
a Interaction of the trophoblast and endometrium during implantation. *Lepus domesticus (Lagomorpha), Mus musculus (Rodentia)*
b Mechanisms involved in fertilization. *Ascaris lumbricoides (Nematoda)*

MORI, H. D.Agr., Prof. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
a Insecticide action on eggs, larvae and adults. *(Insecta)*

MORI, Y. M.A., Prof. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
a On the cause of disappearance of cutaneous melanophores of young animals. *Carassius auratus (Teleostei)*
b Morphological and chemical studies of pigment formation in various species. *(Pisces)*

MORRILL, G. A. Ph.D. — Dept. of Physiol., Albert Einstein Coll. of Med., Yeshiva Univ., 1300 Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.
a The mechanism of activation of the egg. 1. The role of Ca^{++} in regulating membrane permeability. 2. The role of Na^{+} pump and phosphate exchange. 3. The relationship between changes in cytoplasmic and nuclear binding of Na^{+}, K^{+}, Ca^{++} and Mg^{++} and the changing metabolic states at ovulation, fertilization and first cleavage. *Rana pipiens (Anura)*
b The ionic events that occur during blastula formation which are associated with morphogenesis and cell differentiation: the transport of cytoplasmic Na^{+} into the blastocoel. 1. Mapping the changing electric fields at the surface of the developing embryo and correlating these fields with known patterns of cell migrations. 2. Monitoring the rate of Na^{+} release in each of the germ layers. 3. Assaying for vasopressin-like hormone activity in blastula extracts. *Rana pipiens (Anura)*

MORRILL, J. B. Ph.D. — Dept. of Biol., New College, SARASOTA, Fla. 33578, U.S.A.
a Effects of metal ions on development. *Lymnaea stagnalis, L. palustris (Pulmonata, Gastropoda)*
b Chemical differentiation of eggs and chemical composition of egg capsules. *Lymnaea* spec. *(Pulmonata, Gastropoda)*
c Analyses of ooplasmic segregation. *(Pulmonata, Gastropoda)*

MORRIS, B. Ph.D. — Dept. of Zool., Univ. of Nottingham, NOTTINGHAM, England
a Antibody absorption by neonatal animals. *Erinaceus europaeus (Insectivora), Rattus norvegicus (Rodentia)*
b Gastric and intestinal development (postnatal). *Erinaceus europaeus (Insectivora)*

c Development of pituitary and reproductive organs (postnatal). *Erinaceus europaeus (Insectivora)*

MORRIS, Miss I. D. M.Sc. — Dept. of Biochem., Fac. of Sci., Allahabad Univ., ALLAHABAD-2, India

a Quantitative studies of various metabolites during metamorphosis. *Philosamia ricini (Lepidoptera), Musca nebulo, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT, D. M. LAL and R. VARMA)

b Quantitative studies of certain metabolites and enzymic studies on the fat body during larval and pupal development. *Philosamia ricini (Lepidoptera)* (in collaboration with Mrs. R. PANT, D. M. LAL and R. VARMA)

MORRIS, I. G. Ph.D. — A.R.C. Unit of Embryol., Dept. of Zool., Univ. Coll. of N. Wales, BANGOR, Caernarvonshire, Wales, U.K.

MORRIS, Miss V. B. Ph.D. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England

a Autoradiographic study of the time preceding differentiation in different kinds of receptors in the retina. *Gallus domesticus (Aves)*

MOSCONA, A. A. Ph.D., Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, 1101 East 57th St., CHICAGO, Ill. 60637, U.S.A. •

a Cellular and molecular aspects of embryonic differentiation

MOSCONA, M. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Cellular and molecular aspects of embryonic differentiation

MOSER, Mrs. G. C. Ph.D. — Dept. of Genet., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Rd. & Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

a Developmental physiology. *Mus musculus (Rodentia)*

b Developmental genetics. *Mus musculus (Rodentia)*

c Developmental pathology. *Mus musculus (Rodentia)*

MOSSMAN, H. W. Ph.D., Prof. (Emer.) — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A. •

a Comparative morphology of the fetal membranes and reproductive tracts. *(Mammalia)*

MOTOMURA, I. D.Sc., Prof. — Lab. of Embryol., Inst. of Biol., Tôhoku Univ., SENDAI, Japan •

MOTTET, N. K. M.D., Prof. — Dept. of Pathol., Univ. of Washington Med. School, BB232, Univ. Hosp., SEATTLE, Wash. 98105, U.S.A.

a The mechanisms regulating ontogenetic metaplasia in the esophagus. *Gallus domesticus (Aves), Homo sapiens (Primates)*

b Ultrastructural features of necrosis as an ontogenetic process. *Gallus domesticus (Aves), Homo sapiens (Primates)*

c Morphologic changes in the talpid^2 genetic anomaly. *Gallus domesticus (Aves)*

MOULTON, J. M. Ph.D., Prof. — Dept. of Biol., Bowdoin Coll., BRUNSWICK, Me. 04011, U.S.A.

a Changes in the Mauthner cells and axons, and in the thyroid gland during spinal cord regeneration after tail amputation. *Diemyctylus viridescens (Urodela)*

MOVTCHAN, Mrs. N. A. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

a Immunity of the embryo. *Salmo salar (Teleostei), Testudo horsfieldi (Chelonia)*

MOYER, F. H. Ph.D. — Dept. of Biol., Univ. of Missouri, ST. LOUIS, Mo. 63121, U.S.A.

MOYSE, J. Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales, U.K.

MUCHMORE, W. B. Ph.D., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A.

a Development and growth of myotomes. *Ambystoma* spec. *(Urodela)*

MUELLER, G. C. M.D., Ph.D., Prof. — McArdle Lab. for Cancer Research, Univ. of Wisconsin, 450 N. Randall Ave., MADISON, Wis. 53706, U.S.A.

a Growth control mechanisms in cells. *(Mammalia)*

MUGNAINI, E. Cand.med. (M.D.) — Anat. Inst., Univ. of Oslo, Karl Johansgatan 47, OSLO, Norway

MUIR, A. R. M.D., Prof. — Dept. of Anat., Royal (Dick) School of Vet. Studies, Univ. of Edinburgh, Summerhall, EDINBURGH 9, Scotland, U.K.

a Development of cardiac muscle cells, studied on myocardium dissociated by Ca++ deprivation and chelation

MULAREK, Mrs. O. M.D. — Dept. of Neurol., Med. Acad., Przybyszewskiego St. 49, POZNAŃ, Poland

a Influence of ionizing radiation on the developing central nervous system.

MULHERKAR, Mrs. L. Ph.D., Prof. — Dept. of Zool., Univ. of Poona, Ganeshkind, POONA-7, India •

a Transplantations of embryonic tissues. *Gallus* spec. *(Aves)*

b Effects of carcinogenic substances on the embryo. *Calotes versicolor (Lacertilia)*

c Experimental embryology. *Planorbis* spec. *(Pulmonata, Gastropoda)*

d Studies on -SH groups and embryonic induction. *Gallus* spec. *(Aves)*

MÜLLER, A. J. Dr. — Inst. für Kulturpflanzenforsch. der Deutschen Akad. der Wissensch. zu Berlin, GATERSLEBEN, Kr.Aschersleben, East.Germany
a Genetical and physiological studies of embryonic and seedling lethal mutants. *Arabidopsis thaliana (Cruciferae)*

MÜLLER, M. D.Sc. — Inst. of Biol., Univ. of Zagreb, Šalata, ZAGREB, Yugoslavia
a Regulation of compensatory growth. *Rattus norvegicus (Rodentia)* (in collaboration with Miss L. HOFMAN)

MÜLLER, W. A. Dr.rer.nat. — Zoophysiol. Inst. der Univ., Hölderlinstr. 12, 74 TÜBINGEN, W.Germany

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MUN, A. M. Ph.D., Prof. — Dept. of Zool., Univ. of Maine, ORONO, Me. 04473, U.S.A.
a Enhancement of growth of host spleens following chorio-allantoic grafts of homologous tissues. *Gallus gallus (Aves)*
b Induction of immunological tolerance by intracoelomic grafts in the 4-day embryo. *Gallus gallus (Aves)*
c Growth stimulation of embryonic spleen graft by adult spleen across a filter membrane. *Gallus gallus (Aves)*

MUNROE, M. H. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Plant development.

MUNTZ, Miss L. Ph.D. — Dept. of Zool., Fac. of Sci., Univ. of Reading, READING RG1 5AQ, Berks., England
a Comparative studies on the structural development of nerves and muscles. *Xenopus laevis, Eleutherodactylus martinicensis (Anura)*
b Electron microscopic investigation of muscle degeneration. *Eleutherodactylus martinicensis (Anura)*

MURAKAMI, U. M.D., D.Med. Sc., Prof. — The Research Inst. of Environm. Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, 464 Japan
a Effects of ionizing radiations upon embryos of different species. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with Y. KAMEYAMA, K. HOSHINO, and Miss T. NAKAYAMA)
b Morphogenesis of exencephalia and its allied conditions. *Rattus norvegicus (Rodentia)* (in collaboration with K. HOSHINO)
c Morphogenesis of spina bifida and its allied conditions. *Rattus norvegicus (Rodentia)* (in collaboration with K. HOSHINO)
d Mechanisms for the differential radiosensitivity of immature brain tissue, immediate and late effects. *Mus musculus, Rattus norvegicus (Rodentia)*

MURAMATSU, S. D.Sc. — Div. of Radiat. Hazards, Natl. Inst. of Radiol. Sci., Anagawa 4-9, CHIBA, Japan
a Morphological and functional effects of radiation on the embryo. *Mus musculus (Rodentia)*

MURASHOVA, Miss A. I. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

MURRAY, Mrs. M. R. — Dept. of Anat., Coll. of Phys. and Surg., Columbia Univ., 630 W. 168th St., NEW YORK, N.Y. 10032, U.S.A. •

MUSY, J. P. M.D. — Inst. of Histol. and Gen. Embryol., Univ.-Pérolles, 1700 FRIBOURG, Switzerland
a Teratogenetic action of ubiquinone in ovo and in vitro. *Gallus domesticus (Aves)*
b Cytophotometric studies on embryonic fibroblasts: DNA content as a function of oxygen concentration. *Gallus domesticus (Aves)*

MUTH, F. W. Dr.rer.nat. — Inst. für Entw.physiol., Univ. zu Köln, Gyrhofstr. 17, 5 KÖLN-Lindenthal, W.Germany
a Development of the eye pigmentary system and gene controlled pigment synthesis during pupal stages (photometry and chromatography of pigments). *Ephestia kühniella (Lepidoptera)*

MUTHUKKARUPPAN, V. Ph.D. — Annamalai Univ., ANNAMALAINAGAR, P.O., India
a Origin and differentiation of immunocompetent cells and control mechanisms in the development of immune capacities (tissue culture). *Calotes versicolor (Lacertilia)*

MUTOLO, V. M.D. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
a Cell interaction in embryos. *Paracentrotus lividus (Echinoidea)*
b Ribosomal RNA synthesis in embryogenesis. *Paracentrotus lividus (Echinoidea)*

MYSLIVEČEK, J. M.D., D.Sc., Prof. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia

MYTILINEOU, Miss C. M.S. — Zool. Lab. and Museum, Fac. of Sci., Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece

NAAKTGEBOREN, C. Dr. — Zool. Lab., Univ. of Amsterdam, Plantage Doklaan 44, AMSTERDAM, Netherlands
a Development of foetus with regard to birth, especially proportions of foetus and umbilical cord. *(Mammalia)*

b Growth of foetus as a dependent of placental size and uterine characteristics. *Ovis aries (Artiodactyla)* and other *Mammalia*

NABER, E. C. Ph.D., Prof. — Dept. of Poultry Sci., Coll. of Agric., The Ohio State Univ. 674 West Lane Ave., COLUMBUS, Ohio 43210, U.S.A.

a Nutrition and metabolism of the developing embryo. *Gallus domesticus (Aves)*

b Antimetabolites and morphogenesis; relationships to biochemical function. *Gallus domesticus (Aves)*

NACE, G. W. Ph.D., Prof. — Dept. of Zool. and Amphib. Facility, Center for Human Growth and Developm., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

a Development and maintenance of defined strains. *Rana 5* spp., *Bufo 3* spp. *(Anura)*, several spp. *(Urodela)*

b Transfer of macromolecules from maternal organism to egg. *Rana* spec. *(Anura)*

c Etiology of neoplasia in larva and adult. *Rana* spec. *(Anura)*

d Role of specific macromolecules in fertilization. *Rana* spec. *(Anura)*

e Problems in developmental and population genetics. *(Amphibia)*

NADAMITSU, S. D.Sc., Prof. — Biol. Lab., Hiroshima Women's Coll., 1-71 Higashi, 1 chome, Ujina, HIROSHIMA, Japan

a In vitro ovulation. *Mus musculus (Rodentia)*

b Further development of ova in vitro. *Mus musculus (Rodentia)*

c Tissue culture. *Rana* spec. *(Anura)*

d Heteroploidy. *Rana* spec. *(Anura)*

NAGAE, H. M.Sc. — Dept. of Anat., School of Med., Mie Pref. Univ., 100, Torii-Cho, TSU, Japan

a Developmental mechanism of congenital anomalies. *Mus molossinus albinus (Rodentia)*

NAGANO, T. — Dept. of Anat., Univ. of ibadan, IBADAN, Nigeria

NAGEL, J. Dr.3e Cycle — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France

a Hemopoietic function of the foetal liver; factors controlling its progressive disappearance. *Rattus norvegicus (Rodentia)* (in collaboration with R. L. JACQUOT)

NAIR, K. S. S. Ph.D. — Dept. of Zool., Fac. of Sci., M.S. Univ. of Baroda, BARODA-2, India

a Physiology of metamorphosis. *Anthrenus vorax, Trogoderma granarium (Dermestidae, Coleoptera)*

NAKABAYASHI, N. T. — Dept. of Obstet. and Gynecol., Center for Research in Reprod. Biol., Univ. of Michigan Med. Center, ANN ARBOR, Mich. 48104, U.S.A.

a The antigenicity of seminal plasma proteins studied by immunochemical methods. *Homo sapiens (Primates)*

NAKAMURA, I. M.D., Prof. — Dept. of Anat., Nippon Med. School, 1-5, Sendagi 1-chome, Bunkyo-ku, TOKYO, 113 Japan

a Embryological investigation on the cardiac muscle cells, conducting system and heart innervation (electron microscopy). *Gallus domesticus (Aves)*

NAKAMURA, I. M.Sc. — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan

NAKAMURA, K. M.D., Dr.Med.Sci., Prof. — Dept. of Anat., Div. I, Kobe Univ. School of Med., Kusunoki-cho 7, Ikuta-ku, KOBE, (650) Japan

a Experimental teratological studies of the central nervous system. *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

b Developmental study of the blood-brain-barrier. *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

NAKAMURA, O. D.Sc., Prof. — Dept. of Biol., Osaka Kyōiku Univ., Tennoji-ku, OSAKA, 543 Japan

a Fate map and formative movements. *(Amphibia)*

b Cytodifferentiation during cleavage. *(Amphibia)*

c Ultrastructural changes during early development. *(Amphibia)*

d Nucleo-cytoplasmic interaction during early development. *(Amphibia)*

e Cell interactions in relation to cytodifferentiation. *(Amphibia)*

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NAKAYAMA, Miss T. M.Ph. — The Research Inst. of Environm. Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, 464 Japan

a Culture of embryos and embryonic tissues. *Mus musculus (Rodentia)*

b Effects of ionizing radiations upon embryos of different species. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI, Y. KAMEYAMA and K. HOSHINO)

NAKAZAWA, T. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan

a Effects of ionizing radiations on the biochemical mechanism of embryonic development. *Artemia salina (Anostraca, Crustacea)*

b Changes in nucleic acids and some other phosphorus fractions of tissues during late embryonic and early postnatal development. *Rattus norvegicus (Rodentia)*

NANNEY, D. L. Ph.D., Prof. — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A.

a Genetic and developmental studies on cortical variations. *Tetrahymena pyriformis (Ciliata)*

b Regulation of gene action in clonal cultures. *Tetrahymena pyriformis (Ciliata)*

NARAIN (GUPTA), Mrs. B. Ph.D. — Dept. of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India

a In vitro development of the life cycle stages of a parasitic species. *Bunostomum trigonocephalum (Nematoda)*

b Effect of temperature, light (visible and otherwise), and chemicals on in vitro development of the life cycle stages of some parasites of domesticated animals. *(Nematoda)*

NARAYANAN, C. H. Ph.D. — Dept. of Biol., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.

a Degenerative changes in the motor column at the lumbosacral level under normal and experimental conditions. *Gallus domesticus (Aves)*

b Peripheral-central relationship with reference to the development of certain nuclear centers in the embryonic brain. *Coturnix coturnix, Gallus domesticus (Aves)*

c Heterotopic transplantation of spinal cord segments in the embryo and its effect on motility and action pattern of the hind limbs. *Gallus domesticus (Aves)*

d Experimental analysis of motility in fetuses. *Rattus norvegicus (Rodentia)*

NASH, D. Ph.D. — Dept. of Genet., Univ. of Alberta, EDMONTON, Alta., Canada

NAVAGIRI, Mrs. S. S. M.S. — Dept. of Anat., Med. Coll., NAGPUR-3, M.S., India

a Histochemistry of apical ectodermal ridge and the distal developing system of the limb; localization of enzyme responsible for early phase of differentiation. *Gallus domesticus (Aves)*

NAVARATNAM, V. Ph.D. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England

a Ontogenesis of cholinesterase and mono-amine activity in cardiac innervation. *(Mammalia,* incl. *Homo sapiens)*

b Ultrastructure of the yolk sac. *Homo sapiens (Primates)*

NAYLOR, E. Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales, U.K.

NEBEL, L. A. M.D., Prof. — Dept. of Embryol. and Teratol., Tel-Hashomer Hosp., Tel-Aviv Univ. Med. School, TEL-AVIV, Israel

a The effect of hypervitaminosis D_2 on the formation, differentiation and function of the placenta. *Rattus rattus (Rodentia)*

b Structural and functional characteristics of syncytial placenta cells in vitro from normal and pathological pregnancies. *Homo sapiens (Primates)*

NEDVÍDEK, J. RNDr. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia

a Nucleic acids and subcellular particles in oogenesis and early development. *(Amphibia)* (in collaboration with Mrs. V. VILÍMKOVÁ (HÁBROVÁ))

b Transplantation of nuclei in relation to nucleic acids. *(Amphibia)* (in collaboration with F. SLÁDEČEK)

NEEDHAM, A. E. D.Sc. — Dept. of Zool., Univ. of Oxford, Parks Road, OXFORD OX1 3PF, England

a Beryllium chloride and regeneration. *Polycelis nigra (Turbellaria)*

NEEDHAM, J. Dr., Prof. (Emer.) — Gonville and Caius Coll., CAMBRIDGE, Engeland •

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NEMOTO, S. M.Sc. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO, 158 Japan

a Metabolic rhythm during cleavage. *(Echinoidea)*

NETZEL, H. E. M. Dr.rer.nat. — Zool. Inst. der Univ., Hölderlinstr. 12, D 74 TÜBINGEN, W.Germany

a Morphogenesis. *Centropyxis aculeata, C. discoides (Testacea, Rhizopoda)*

NEUMANN, D. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany

a Lunar periodicity of metamorphosis. *Clunio marinus (Chironomidae, Diptera)*

NEW, D. A. T. Ph.D. — Physiol. Dept., Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3EG, England •

a Study of embryos developing in vitro. *(Mammalia)*

NEWBURGH, R. W. Ph.D., Prof. — Dept. of Biochem. and Biophys., Fac. of Sci., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.

a Chemical and biochemical changes during development.

NEWMAN, M. J. M.Phil. — Anat. Dept., The Med. School, University Walk, BRISTOL BS8 1TD, England

a Electron microscopic and histochemical study of cells involved in morphogenetic movements in primitive streak stages. *Rattus norvegicus (Rodentia)*

NEWTH, D. R. Ph.D., Prof. — Dept. of Zool., The University, GLASGOW W2, Scotland, U.K.
a Regeneration of defective organs. *(Amphibia)*
b Activity of grafted spleens against organ-specific antigens .*Xenopus laevis (Anura)*
NEYFAKH, A. A. Dr.biol.sci., Prof. — Lab. of Biochem. Embryol., Inst. of Developmental Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW V-133, U.S.S.R.
NIAZI, I. A. Ph.D. — Dept. of Zool., Univ. of Rajasthan, JAIPUR, India
a Limb and tail regeneration. *Bufo* spec., *Rana* spec. *(Anura)*
b Enzyme studies during limb regeneration. *Bufo* spec., *Rana* spec. *(Anura)*
c Influence of hypo- and hypervitaminosis A on development (ontogenetic and regenerative) in embryonic and larval stages. *Bufo* spec., *Rana* spec. *(Anura), Gallus domesticus (Aves)*
d Role of thyroid and adrenal hormones in larval limb regeneration. *Bufo* spec., *Rana* spec. *(Anura)*
e Nerves in regeneration of limbs. *Bufo* spec., *Rana* spec. *(Anura)*
f Development of the spinal cord in larvae (histological and histochemical). *Bufo* spec., *Rana* spec. *(Anura)*
NICOLET, G. D.Sc. — Lab. d'Embryol. Expér., Inst. d'Histol., Univ. de Genève, 20 rue de l'Ecole de Médecine, 1211 GENÈVE 4, Switzerland
a Studies of the fate of the different parts of the primitive streak with the help of grafts labelled with tritiated thymidine. *Gallus domesticus (Aves)*
b Investigations of the primary induction process with the help of labelled precursors. *(Aves)*
c Role of Hensen's node in somitic differentiation. *(Aves)*
NIE, C. J. van D.V.M. — Lab. of Anat. and Embryol., Free Univ., v. d. Boechorstst. 7, AMSTERDAM, Buitenveldert, Netherlands
a Ontogenetic malformations of the heart. *Sus scrofa, Bos taurus (Artiodactyla)*
b Pathological development of heart and vessels. *Sus scrofa, Bos taurus (Artiodactyla)*
c Pathological development of bone. *Sus scrofa (Artiodactyla)*
d Neonatal circulation. *Sus domesticus (Artiodactyla)*
e Teratology. *(Mammalia), Homo sapiens (Primates)*
NIEUWKOOP, P. D. Phil.Dr., Prof. — Hubrecht Lab. (Intern. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a Experimental-morphological, electron-microscopical, biochemical, biophysical and histochemical analysis of morphogenetic interactions during early development. *Ambystoma mexicanum (Urodela)* (in collaboration with Miss E. C. BOTERENBROOD, J. G. BLUEMINK, P. Th. M. van der SAAG, S. W. de LAAT and Miss G. A. UBBELS)
b The induction of the mesoderm in the blastula and the origin of the dorso-ventral polarity of the egg. *Ambystoma mexicanum (Urodela)*
c Pattern formation in artificially activated ectoderm. *Ambystoma punctatum, A. mexicanum (Urodela), Rana pipiens (Anura)*
d Causal analysis of early development. *Locusta migratoria, Gryllus domesticus (Orthoptera)*
NIGON, V. Dr.ès Sci., Prof. — Sect. de Biol. Génér. et Appl., Fac. des Sci. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Métabolisme dans les diverses phases de l'évolution. *Euglena gracilis (Euglenophyceae)*
b Différenciation des érythrocytes. *Gallus domesticus (Aves)*
NIIZIMA, M. M.D., Ph.D., Prof. — Dept. of Anat., Fac. of Med., Tokyo Med. and Dental Univ., 1-5-47, Yushima, Bunkyo-ku, TOKYO (113) Japan
a Tissue culture studies on metamorphosis. *Rana catesbeiana, R. japonica, Bufo vulgaris (Anura)*
b Tissue culture studies on the development and differentiation of dental tissues. *Rattus norvegicus albinus, Felis domestica, Homo sapiens (Mammalia)*
c Tissue culture studies on cell differentiation. *Gallus domesticus (Aves)*
d Identification of fibroblasts in tissue culture. *Gallus domesticus (Aves), Rattus norvegicus, Homo sapiens (Mammalia)*
e Transplantation of tissue. *Rana catesbeiana, R. japonica, Bufo vulgaris (Anura), Mus musculus, Rattus norvegicus (Rodentia)*
NIKITIN, N. S. Dr. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.
a Morphogenetic potentiality of somatic cells. *Ephydatia fluviatilis (Porifera)*
b Separation of different cell types (centrifugation, filtration, micro-manipulation). *(Porifera)*
c Development of culture media for dissociated cells. *(Porifera)*
NIKITINA, Mrs. L. A. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Analysis of developmental potencies of nuclei in sequential stages of oogenesis by means of their transplantation into enucleated eggs. *(Acipenseridae, Chondrostei; Amphibia)*
b The influence of fractionated homogenates of some differentiating tissues (retina, muscle etc.) on the differentiation of future ectoderm in uncleaved eggs and early stages of cleavage. *Triturus taeniatus (Urodela), Gallus domesticus (Aves)* (in collaboration with G. V. LOPASHOV)

NIKOLSKAYA, Miss I. S. Cand.biol.sci. — Lab. of Developm. Biophys., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

NILSSON, E. I. Y. Phil.kand. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden

a Determination of cortical tension in oocytes and eggs. *(Amphibia)*

NILSSON, J. R. Dr. — Biol. Inst. of the Carlsberg Found., Tagensvej 16, 2200 COPENHAGEN N., Denmark

a Electron microscopic study of cell regeneration after short exposure to unfavourable conditions. *Tetrahymena pyriformis (Ciliata)*

NILSSON, S. B. Phil.mag. — Dept. of Zoophysiol., Univ. of Umeå, S 901 87 UMEÅ, Sweden

a Carbohydrate metabolism in very young embryos. *Rana* spp. *(Anura), Gallus domesticus (Aves)* (in collaboration with S. LØVTRUP)

NISHIMURA, H. M.D., Prof. — Dept. of Anat., Kyoto Univ., Yoshida, Konoe-cho, Sakyo-ku, KYOTO 606, Japan

a Modification of susceptibility to teratogenesis. *Mus musculus (Rodentia)*

b Tests on drug teratogenicity. *Macaca fuscata (Primates)*

c Anomalies in early embryos and maternal factors. *Homo sapiens (Primates)*

NISHIOKA, Miss M. D.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan

a Synthesis of amphidiploids. *(Ranidae, Anura)*

b Synthesis of nucleo-cytoplasmic hybrids between different species. *(Ranidae, Anura)*

NISHIZU, K. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan

a Myotube formation in cultured cells. *Gallus domesticus (Aves)*

NIU, M. C. Ph.D., Prof. — Dept. of Biol., Temple Univ., Broad and Berks St., PHILADELPHIA, Pa. 19122, U.S.A.

NIXON, D. A. Ph.D. — Physiol. Dept., St. Mary's Hosp. Med. School, Paddington, LONDON W.2, England

a Perfusion of the isolated foetus. *Ovis aries (Artiodactyla)*

b Development of renal function. *Ovis aries (Artiodactyla)*

NJEUMA (EFFANGE), Mrs. D. L. Sc.B. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a The effects of cell density on mitosis in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)*

NOGAMI, H. M.D. — Dept. of Orthopaedic Surg., School of Med., Nagoya Univ., 65 Tsuruma-cho, Showa-ku, NAGOYA, Japan

a Digital malformations in the fetus caused by X-irradiation. *Mus musculus (Rodentia)*

b Limb and digital malformations in the fetus caused by excessive vitamin A. *Mus musculus (Rodentia)*

c The development of congenital spinal malformations induced by administration of 6-AN (6-aminonicotinamide), studied by means of periodic roentgenographic and histological examination until 360 days after birth. *Mus musculus (Rodentia)*

NOLL, F. Dr.med. — Inst. für Zellphysiol., Deutsche Akad. der Wissensch. zu Berlin, Lindenberger Weg 70, 1115 BERLIN-Buch, East.Germany

NONAMI, Y. Dr.Agric., Prof. — Dept. of Biochem. and Technol. of Anim. Products, Fac. of Agric., Univ. of Niigata, 106, Koganecho, NIIGATA, 950 Japan

a Lysozyme of incubated egg white. *Gallus domesticus (Aves)*

b Nucleic acids of yolk and white of the incubated egg; fate of sugar-nucleotides during incubation. *Gallus domesticus (Aves)*

NØRBAEK SØRENSEN, I. — Finsen Lab., Finsen Inst., 49 Strandboulevard, DK-2100 COPENHAGEN, Denmark

a Cell kinetics and follicle growth after a single injection of testosterone propionate in infancy (^{3}H-thymidine labelling and autoradiography). *Mus musculus (Rodentia)*

NORD, L. M.D. — Tornblad-Inst. for Comp. Embryol., Biskopsgatan 7, LUND, Sweden

a Brain differentiation studied with immunofluorescence. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

b Monamine development in the nervous system. *Gallus domesticus (Aves)* (in collaboration with L. HÅKANSSON)

NORMAN, C. Ph.D., Prof. — Dept. of Biol., West Virginia Univ., MORGANTOWN, W.Va. 26506, U.S.A.

a The intracellular distribution of sulfhydryl groups in embryonic, adult and tumorous tissues. *Rana pipiens (Anura)*

b Effects of pH on the metabolism and fertilizing capacity of spermatozoa cultured in vitro. *(Mammalia)*

c Effects of light on spermatozoa. *(Mammalia)*

d Physiology and biochemistry of germ cells. *(Mammalia)*

e Physiological and biochemical basis of cell senescence.

f The effect of sterols on growth and development of sexuality. *Phytophthora cactorum (Fungi)*

NØRREVANG, A. D.Sc. — Inst. of Comp. Anat., Universitetsparken 15, COPENHAGEN O, Denmark
a Embryology. *Armillifer* spec. *(Linguatulida)* (in collaboration with K. G. WINGSTRAND)
b Oogenesis (histological, histochemical and ultrastructural). *Priapulus caudatus (Priapulida)*
c Early embryology. *(Pogonophora)*
NORSTOG, K. J. Ph.D., Prof. — Dept. of Biol. Sci., Northern Illinois Univ., DeKALB, Ill. 60115, U.S.A.
a Development of cultured tissues. *Cycadales* and other spp. *(Gymnospermae)*, cereals and other spp. *(Angiospermae)*
b Embryology (tissue culture and electron microscopy). *Hordeum vulgare (Gramineae)*
NOTO, T. Dr.Sci. — Dept. of Biol., Miyazaki Univ., MIYAZAKI, Japan
a Tissue transformations in isolated pieces of early blastoderm, caused by RNA extracted from 10-day embryos, pretreated with actinomycin D. *Gallus domesticus (Aves)*
b Theoretical considerations on possible mechanisms of genetical differentiation
NOUMURA, T. D.Sc. — Div. of Endocrinol., Natl. Cancer Center Research Inst., Tsukiji 5-chome, Chuo-ku, TOKYO, Japan
a Identification of embryonic gonadal hormones in sex differentiation. *Gallus* spec. *(Aves)*, *Rattus* spec. *(Rodentia)*
b Mechanism of gamete-shedding by the product of radial nerves. *Asterias amurensis, Asterina pectinifera (Asteroidea, Echinodermata)*
c Mechanism of hormone action on developing genital systems. *Gallus* spec. *(Aves)*, *Rattus* spec. *(Rodentia)*
NOVÁK, V. J. A. D.Sc. — Dept. of Physiol., Inst. of Entomol., Czechoslov. Acad. of Sci., Na Folimance 5, PRAHA 2, Czechoslovakia
NOVEL, G. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Experimental analysis of the role of epidermal feather placodes and dermal feather condensations in the formation of the feather. *Gallus domesticus (Aves)*
NOWAKÓWNA, Miss J. D.Sc. — Zaklad Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul.Sienkiewicza 21, WROCŁAW, Poland
a Cytological studies in larval development. *Triturus cristatus, T. vulgaris, T. alpestris, T. montandoni (Urodela)*
NOYES, G. S. B.A. — Ira C. Darling Center for Research, (Marine Lab.), Univ. of Maine, WALPOLE, Me. 04573, U.S.A.
a Metamorphosis, gametogenesis and oogenesis. *Aglaophamus* spec. nov. *(Nephtyidae, Polychaeta)*
NOYES, R. W. M.D., Prof. — Dept. of Anat., Univ. of Hawaii, 1951 East-West Rd., HONOLULU, Hawaii 96822, U.S.A.
a Tubal transport of spermatozoa and ova. *(Mammalia)*
NÜESCH, H. Dr.sci.nat., Prof. — Zool. Anstalt der Univ., Rheinsprung 9, 4000 BASEL, Switzerland
NUMANOI, H. Ph.D., Prof. — Biol. Lab., School of Educ., Waseda Univ., Tozuka, Shinjuku-ku, TOKYO, Japan
NUSSBAUM, N. S. Ph.D. — Dept. of Biol., Div. of Sci. and Engin., Wright State Univ., Col.Glenn Highway, DAYTON, Ohio 45431, U.S.A.
a Hormonal aspects of mineralization as studied in hypophysectomized, mature animals (using regenerating scales as test objects). *Carassius auratus, Fundulus heteroclitus (Teleostei)*
b Electron micrographic aspects of scale regeneration in non-juvenile animals (autoradiography and cytochemical techniques applied at ultrastructural level). *Carassius auratus (Teleostei)*
OBERLANDER, H. Ph.D. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.
a Cellular aspects of the hormonal control of metamorphosis. *Galleria mellonella (Lepidoptera), Drosophila melanogaster (Diptera)*
b Developmental behavior of imaginal discs in vivo and in vitro. *Galleria mellonella (Lepidoptera), Drosophila melanogaster (Diptera)*
OBIKA, M. D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
a Correlation between pigment formation and pterin derivatives during development. *(Amphibia)*
b Experimental and electron microscopic studies on the cytodifferentiation of chromatophores. *Hynobius tokyoensis, H. nigrescens, Ambystoma mexicanum, Triturus pyrrhogaster (Urodela), Xenopus laevis, Bufo vulgaris, Rana japonica (Anura)*
OBINATA, T. M.Sc. — Biol. Inst., Coll. of Gen. Educ., Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan
O'BRIEN, B. R. A. Ph.D., Prof. — School of Anat., Univ. of New South Wales, P.O. Box 1, KENSINGTON, N.S.W. 2033, Australia
a Development and augmentation of intracellular enzyme proteins in cultured cells in the presence of extraneous DNA and RNA preparations. *Mus musculus (Rodentia)*

b A study of protein synthesis and utilisation in differentiating nerve cells cultured in vitro. *Gallus domesticus (Aves)*

ODA, S. D.Sc., Prof. — Biol. Lab., Coll. of Gener. Educ., St. Paul's Univ., 3 Nishi-Ikebukuro, Toshima-ku, TOKYO, (171) Japan

a Germination of statoblasts. *Lophopodella carteri (Phylactolaemata, Bryozoa)*

O'DAY, D. H. B.Sc. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a Development of alkaline phosphatase activity in embryos; biochemical analysis (specific activity, gel electrophoresis) and histochemical analysis. *Ambystoma gracile, Taricha torosa (Urodela)* (in collaboration with C. V. FINNEGAN)

O'FARRELL, A. F. A.R.C.S., Prof. — Dept. of Zool., Fac. of Sci., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia

a Regeneration and the endocrine system. *Blattella germanica (Dictyoptera)* (in collaboration with A. STOCK)

OGREN, R. E. Ph.D. — Dept. of Biol., Wilkes Coll., WILKES-BARRE, Pa. 18703, U.S.A.

a Embryonic development (maturation, cleavage). *Hymenolepis diminuta (Cestodes)*

b Structure and development of hexacanth embryos (oncospheres). *Hymenolepis diminuta (Cestodes)*

c Differentiation of hooks in onconblasts of immature embryos. *Hymenolepis diminuta (Cestodes)*

d Differentiation and movement of embryonic myoblasts. *Hymenolepis diminuta (Cestodes)*

OHASHI, T. M.Sc. — Dept. of Anat., School of Med., Mie Pref. Univ., 100, Torii-Cho, TSU, Japan

a Developmental mechanism of the central and peripheral nervous system. *Hynobius nebulosus (Urodela)*

OHNO, S. Ph.D., D.Sc. — Dept. of Biol., City of Hope Med. Center, 1500 E. Duarte Rd., DUARTE, Calif. 91010, U.S.A.

a Oogenesis. *Mus musculus, Microtus oregoni (Rodentia), Bos taurus (Artiodactyla)*

b Embryonic blastema for somatic elements of the gonad. *Epitatretus stoutii (Cyclostomata), Salmo irideus (Teleostei), Lepus californicus (Lagomorpha), Peromyscus maniculatus (Rodentia), Bos taurus (Artiodactyla)*

c The gene activation mechanism in development, using the 6-PGD and ADH loci as markers. *Coturnix coturnix (Aves)*

d Preferential activation of maternally derived alleles in development of extreme interspecific hybrids, using the LDH, ADH, and 6-PGD loci as markers. *Coturnix coturnix* x *Gallus domesticus (Aves), Salmo gairdneri* x *S. trutta (Teleostei)*

OHSAKI, K. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan

a Development of egg. *Dugesia japonica (Turbellaria)*

b Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*

OJEDA SAHAGUN, J. L. Dr.en Med. — Serv. de Embriol. Exper., Cat. de Anat., Fac. de Med., VALLADOLID, Spain

a Biochemical and ultrastructural effects of barbituric compounds on the embryo. *Gallus domesticus (Aves)*

b Effect of peripheric innervation area on cellular kinetics in the CNS (autoradiography). *Gallus domesticus (Aves)*

OJIMA, Y. D.Sc., Prof. — Dept. of Biol., Kwansei Gakuin Univ., Uegahara 1, NISHINOMIYA, Hyogo-ken 662, Japan

a Developmental genetics. *Carassius auratus, Cyprinus carpio (Teleostei)*

b Developmental cytogenetics. *Misgurnus anguillicaudatus, Cobitis biwae* and other japanese species *(Teleostei)*

c Electron microscopy of fertilization. *Mus musculus (Rodentia)*

OKA, H. Ph.D., Prof. (Emer.) — Inst. of Zool., Fac. of Sci., Tokyo Kyoiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan •

OKADA, M. Ph.D. — Inst. of Zool., Fac. of Sci., Tokyo Kyoiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan

a Electron microscopical and biochemical analyses of embryonic diapause. *Bombyx mori (Lepidoptera)*

OKADA, T. S. D.Sc., Prof. — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan •

OKADA, Y. K. Dr., Prof. (Emer.) — Div. of Zool., Natl. Sci. Museum, Ueno Park, Daito-ku, TOKYO, Japan •

OKAZAKI, Miss K. D.Sc. — Embryol. Sect., Biol. Dept., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan •

a Mechanism of spicule formation. *(Echinoidea)*

b Myogenesis. *(Aves; Mammalia)*

OKSCHE, A. Dr.med., Prof. — Anat. Inst. der Univ. Giessen, Friedrichstr. 24, 63 GIESSEN, W. Germany

a Vergleichende Studien über die Entwicklung, cytologische Differenzierung, Cytodynamik und Funktion der Epiphyse und des Subcommissuralorgans; Potenzen des Neuralrohrepithels und ihre Realisierung. Typische Vertreter aller Klassen. *(Vertebrata)*

OKUNO, Y. — Dept. of Biol., Osaka Kyôiku Univ., Ten-noji-ku, OSAKA, 543 Japan

a Differentiation of neoblasts. *Dugesia japonica (Turbellaria)*

b In vitro culture of blastema. *Dugesia japonica (Turbellaria)*

OLDFIELD (WHITEHEAD), Mrs. E. Ph.D. — Science Dept., Coombe Second. School for Girls, Clarence Ave., NEW MALDEN, Surrey, England

OLIVEREAU, Miss M. M. A. Dr.ès Sci. — Lab. de Physiol., Inst. Océanographique, 195 rue Saint-Jacques, PARIS Ve, France

a Cytology and histochemistry of endocrine glands in relation with development, and after various experimental procedures. *(Salmonidae)*

b Study of pituitary grafting. *Mollienesia formosa (Cyprinodontidae)*

c Histophysiology of endocrine glands. *Anguilla anguilla (Anguillidae)*

d Hypophyseal-adrenocortical relationships, with chemical inhibitors, using histological techniques. *(Salmonidae, Anguillidae, Poeciliidae)*

e Histophysiology of the pituitary gland in immature and mature animals, in correlation with osmoregulatory processes. *Mugil auratus (Teleostei)*

OLIVERO, M. Dr. — Inst. of exp. Embryol., Univ. of Turin, Via Giolitti 34, 10123 TORINO, Italy

a Induction by prolactin of thyroid activation in larvae at avanced metamorphic stages. *Bufo bufo (Anura)* (in collaboration with R. BRUNO, Miss A. GUARDABASSI, M. T. RINAUDO, E. CAMPANTICO and C. GIUNTA)

OLIVO, O. M. Prof. — Ist. di Anat. Umana Norm., Univ. di Bologna, Via Irnerio 48, BOLOGNA, Italy •

ONUMA, H. Ph.D. — Natl. Inst. of Anim. Industry, CHIBA-shi, 280 Japan

a In vitro culture and storage of eggs. *Oryctolagus cuniculus (Lagomorpha), Capra hircus, Bos taurus (Artiodactyla)*

OOISHI, Miss S. D.Sc. — Zool. Inst., Fac. of Fish., Pref. Univ. of Mie, 158 Edobashi 2-chome, TSU, Mie Pref., 514 Japan

a Postembryonic development. *(Notodelphyidae, Copepoda)*

OOSTROM, C. G. van Med.drs. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands

a Differentiation of germ layers. *(Mammalia)* (in collaboration with C. D. A. VERWOERD)

OPPENHEIM, R. Ph.D. — Neuroembryol. Lab., North Carolina Dept. of Mental Health, Dorothea Dix Hosp., RALEIGH, N.C. 27602, U.S.A.

a Neural and behavioural aspects of embryonic development (behavioural observations, microsurgery, brain stimulation and histological techniques). *Gallus gallus, Anas platyrhynchos, Streptopelia risoria (Aves)*

OPPENHEIMER, Miss J. M. Ph.D., Prof. — Dept. of Biol., Bryn Mawr Coll., BRYN MAWR, Pa. 19010, U.S.A. •

a Grafting of reaggregated cells from portions of the embryonic shield. *Fundulus heteroclitus (Teleostei)*

b Characterization of phospholipids in the developing nervous system. *Fundulus heteroclitus (Teleostei)*

O'RAHILLY, R. M.D., Prof. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A. •

a Early development (horizons I to IX). *Homo sapiens (Primates)*

ORGEBIN (CRIST), Mrs. M. C. Dr. — Dept. of Obstet. and Gynecol., Vanderbilt Univ. School of Med., NASHVILLE, Tenn. 37203, U.S.A.

ORLOVA, Mrs. I. I. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

ORNOY, A. M.D. — Dept. of Embryol. and Teratol., Tel-Hashomer Hosp., Tel-Aviv Univ. Med. School, TEL-AVIV, Israel

a Studies on the protective actions of pregnancy in Vitamin D_2 toxicosis. *Rattus rattus (Rodentia)* (in collaboration with L. A. NEBEL)

ORSINI, Mrs. M. W. G. Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A. •

a Fetal membranes, giant cells and pregnancy changes in uterine vessels. *Mesocricetus auratus (Rodentia)*

b Factors controlling implantation and loss of zona pellucida. *Mesocricetus auratus, Rattus norvegicus, Mus musculus, Cavia porcellus (Rodentia), Mustela putorius, M. vison (Carnivora)*

c Decidualization during pregnancy and pseudopregnancy. *Mesocricetus auratus, Rattus norvegicus, Mus musculus, Cavia porcellus (Rodentia), Mustela putorius, M. vison (Carnivora)*

d Factors controlling life of corpora lutea. *Mesocricetus auratus (Rodentia)*

ORTOLANI, Miss G. D.Sc., Prof. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy

a Interspecific transplantation of nuclei into eggs. *(Amphibia)*
b Gynogenesis. *(Ascidiae)*

ORTS LLORCA, F. Prof. — Dept. of Anat., Fac. de Med., Ciudad Univ., MADRID, Spain •
a Heterologous grafts in the blastodisc from cardiac area to non-cardiac area and vice versa. labeled with tritiated thymidine. *Gallus domesticus (Aves)*

O'STEEN, W. K. Ph.D., Prof. — Dept. of Anat., Div. of Basic Health Sci., Emory Univ., ATLANTA, Ga. 30322, U.S.A.
(no embryological work in progress)

OTSUKI, K. Ph.D. — Natl. Inst. of Anim. Industry, CHIBA-shi, 280 Japan
a Cytochemical nature of the acrosomic system of spermatids and spermatozoa. *Bos taurus (Artiodactyla)*
b Storage of fertilized eggs. *Oryctolagus cuniculus (Lagomorpha), Capra hircus (Artiodactyla)*

OTTENHAMMAR, G. Fil.mag. — Zool. Inst., Univ. of Gothenburg, 4de Långgatan 7B, GÖTEBORG SV, Sweden

OTZCHELI, Mrs. T. A. Cand.biol.sci. — Dept. of Anim. Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

OUWENEEL, W. J. M.Sc. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum „De Uithof", UTRECHT, Netherlands
a In vivo culture of imaginal eye discs of homoeotic eye mutants. *Drosophila melanogaster (Diptera)*

OVERTON, Mrs. J. H. Ph.D., Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A. •
a Electron microscopic studies of cell surfaces and cell contacts

OWERS, N. O. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Enzymatic activities of the implanting blastocyst. *Rattus norvegicus, Cavia porcellus (Rodentia)*

OWRE (BOEHME), Mrs. M. H. Ph.D., Prof. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, MIAMI, Fla. 33149, U.S.A.

OZAKI, H. Ph.D. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.
a Enzyme regulation during development; especially supernatant and mitochondrial malate dehydrogenases. *Strongylocentrotus purpuratus (Echinoidea)*
b RNA synthesis primed by chromatin isolated from embryos. *Strongylocentrotus purpuratus (Echinoidea)*

OŻDŻEŃSKI, W. M.Sc. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a Origin and differentiation of primordial germ cells. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Differentiation of the somatic and germinal tissues of a mouse gonad. *Mus musculus (Rodentia)*

OZEKI, K. D.Sc., Prof. — Biol. Inst., Coll. of Gen. Educ., Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

PACKER, A. D. M.D. — Dept. of Anat. and Histol., Univ. of Adelaide, ADELAIDE, S.Australia 5000, Australia
a Experimental teratology. *(Rodentia)*

PADYKULA, Miss H. A. Ph.D., Prof. — Lab. of Cell. Biol., Dept. of Biol. Sci., Wellesley Coll., WELLESLEY, Mass. 02181, U.S.A.
a Postnatal differentiation of three fiber types in skeletal muscle (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss G. F. GAUTHIER and Miss J. M. TAYLOR)
b Differentiation of neuromuscular junctions in skeletal muscle (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss G. F. GAUTHIER and Miss J. M. TAYLOR)
c Ovarian-uterine-placental relationship (electron microscopy and histochemistry). *Didelphys virginiana (Marsupialia)* (in collaboration with Miss G. F. GAUTHIER and Miss J. M. TAYLOR)
d Lipid transport by the yolk sac placenta (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss G. F. GAUTHIER and Miss J. M. TAYLOR)

PAGE, L. A. M.D. — Dept. of Pediat., School of Med., Stanford Univ., 300 Pasteur Drive, PALO ALTO, Calif. 94304, U.S.A.
a Synthesis of serum proteins. *Rattus norvegicus (Rodentia), Sus scrofa* (interbred) *(Artiodactyla)*
b Translational level controls of protein synthesis. *Rattus norvegicus (Rodentia), Sus scrofa* (interbred) *(Artiodactyla)*

PAGEOT (SIMPSON), Mrs. P. Lic.ès. Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Ave. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France

a Transdetermination in imaginal discs after long-term culture in vivo. *Drosophila melanogaster (Diptera)*

PAGER, Miss J. Dr.3e Cycle — Lab. de Physiol. Anim., Fac. des Sci., Univ. de Poitiers, 40 Av. de Recteur Pineau, 86 POITIERS, France

a Histology and electron microscopy of the embryonic heart. *Ambystoma tigrinum (Urodela), Rattus norvegicus (Rodentia)*

PAI, M. L. Ph.D. — Dept. of Biochem., Med. Coll., BARODA, Gujarat State, India

PAI, S. Dr.rer.nat. — Lab. of Developm. Physiol., Inst. of Exper. Biol., Acad. Sinica, 320 Yo Yang Rd., SHANGHAI, People's Republ. of China •

PALA, Miss M. Dr. — Ist. di Zool., Fac. di S.M.F.N., Univ. di Sassari, Via Murroni 25, 07100 SASSARI, Italy

a Research on the origin of the primordial germ cells. *Anas* spec. *(Aves)*

PALEČEK, J. RNDr. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia

a Proteins and antigens in early development. *(Amphibia)* (in collaboration with A. ROMANOVSKÝ, A. MACELA and J. MÁCHA)

PALMA, A. M.D. — Ist. di Anat. Umana Norm., Univ. di Roma, Viale Regina Elena 289, ROMA, Italy

PALMITER, R. D. Ph.D. — Dept. of Pharmacol., School of Med., Stanford Univ., STANFORD, Calif. 94305, U.S.A.

a Mechanisms of steroid (especially estrogen and progesterone) induction of ovalbumin synthesis in the oviduct of the immature chicken. *Gallus domesticus (Aves)*

PANDEY, K. M.Sc. — Dept. of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India

a Seasonal changes in the secretory activity of the pituitary gland in relation to the gonads of a freshwater eel. The possible role of the gonadotrophins in regulation and development of gonads. *(Teleostei)*

PANIGEL, M. Dr.en Méd., Dr.ès Sci., Prof. — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôp. Saint-Antoine, 184, rue du Faubourg Saint-Antoine, PARIS 12e, France

a Placental structure and function: ultrastructural and perfusion studies (morphology, physiology and pathology). *Cavia* spec., *Mus* spec. *(Rodentia), Macaca* spec., *Papio* spec., *Homo sapiens (Primates)*

b The uteroplacental circulation. *Cynomolgus* spec. *(Primates)*

PANITZ, R. Dr. — Inst. für Kulturpflanzenforsch. der Deutschen Akad. der Wissenschaften zu Berlin, GATERSLEBEN, Kr.Aschersleben, East.Germany

a Cytological and biochemical characterization of gene function in giant chromosomes. *Acricotopus lucidus, Chironomus thummi, C. strenzkei (Chironomidae, Diptera)*

PANNBACKER, R. G. Ph.D. — Charles F. Kettering Research Labs., 150 E.South College St., YELLOW SPRINGS, Ohio 45387, U.S.A.

a The chemical nature of aggregation hormones. *Dictyostelium discoideum (Acrasiales)*

b Histochemical study of differentiation at the multicellular level. *Dictyostelium discoideum (Acrasiales)*

PANNESE, E. M.D., Prof. — 2nd Chair of Human Anat., Univ. of Milano, Via Mangiagalli 31, 20133 MILANO, Italy

a Histochemical study at the electron microscope level of the differentiation of neuroblasts in embryonic spinal ganglia. *Gallus gallus (Aves)*

b Electron microscope study of the development of satellite cells in spinal ganglia. *Gallus gallus (Aves)*

PANT (AIYAR), Mrs. R. Ph.D. — Dept. of Biochem., Fac. of Sci., Allahabad Univ., ALLAHABAD-2, India

a Quantitative studies of various metabolites in eggs, e.g. nitrogenous compounds, phosphorus compounds, reducing substances and citric acid. *Philosamia ricini (Lepidoptera), Musca domestica, Sarcophaga ruficornis (Diptera)* (in collaboration with D. M. LAL and R. VARMA)

b Variation in the activity of some enzymes in eggs. *Philosamia ricini (Lepidoptera), Musca domestica, Sarcophaga ruficornis (Diptera)* (in collaboration with D. M. LAL and R. VARMA)

c Quantitative studies of various metabolites during metamorphosis. *Philosamia ricini (Lepidoptera), Musca nebulo, Sarcophaga ruficornis (Diptera)* (in collaboration with D. M. LAL, Miss I. D. MORRIS and R. VARMA)

d Quantitative studies of certain metabolites and enzymic studies on the fat body during larval and pupal development. *Philosamia ricini (Lepidoptera)* (in collaboration with D. M. LAL, Miss I. D. MORRIS and R. VARMA)

PANTELOURIS, E. M. Ph.D. — Dept. of Appl. Microbiol. and Biol., Univ. of Strathclyde, George St., GLASGOW C.1, Scotland, U.K.

a Effects of radiation on foetuses and means of alleviating them. *Mus musculus (Rodentia)*

b Ontogenesis and inheritance of iso-enzymes. *Drosophila* spp. *(Diptera), (Vertebrata)*

PAPACONSTANTINOU, J. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A. •

a Studies on the regulation of protein and nucleic acid synthesis in lens cell differentiation in vivo and in vitro. *Gallus domesticus (Aves), Bos taurus (Artiodactyla)*
b The molecular events associated with lens fiber cell formation in vivo and in vitro; a) DNA synthesis; b) RNA synthesis and mechanism of stabilization of m-RNA; c) regulation of protein synthesis. *Gallus domesticus (Aves), Bos taurus (Artiodactyla)*
c The regulation of DNA synthesis during development: 1. mechanism of DNA puff formation in salivary gland during 4th instar development. 2. DNA synthesis in testis during pre-meiotic prophase, in 4th instar. *Rhynchosciara angelae (Diptera)*

PARISI, V. Dr. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italy

PARK, Miss H. D. Ph.D. — Natl. Inst. of Arthritis and Metab. Diseases, Bldg 2, Rm B1-14, BETHESDA, Md. 20014, U.S.A.
a Cell division, differentiation and movement during regeneration. *Hydra pseudoligactis (Hydroidea)*
b Relationship of growth and bud development to temperature changes. *Hydra littoralis (Hydroidea)*

PARNELL (KING), Mrs. J. B.Sc., M.B., B.Ch., Prof. — Dept. of Anat., Georgetown Univ., 3900 Reservoir Rd., N.W., WASHINGTON, D.C. 20007, U.S.A.

PARRINELLO, N. D.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a Hybridization between subspecies. *Discoglossus pictus (Anura)*

PARSONS, R. M.Sc. — Muscular Dystrophy Research Labs., Newcastle Gen. Hosp., NEWCASTLE upon Tyne NE4 6BE, England
a Cinemicrographic studies of the growth patterns of myoblasts cultured from normal and dystrophic muscle under the differential interference microscope, with an eye to determining the origin of the myoblast nuclei. *Gallus domesticus (Aves), Mus musculus (Rodentia), Homo sapiens (Primates)*
b Electron microscope studies of normal myoblasts undergoing active fusion, and myoblasts from dystrophic origin, with special attention to ribosome numbers and nucleolar morphology. *Gallus domesticus (Aves), Mus musculus (Rodentia), Homo sapiens (Primates)*

PARTANEN, C. R. Ph.D., Prof. — Dept. of Biol., Univ. of Pittsburgh, PITTSBURGH Pa. 15213, U.S.A.
a Nuclear aspects of cellular differentiation in vitro. *Paeonia suffruticosa (Ranunculaceae), Allium cepa (Liliaceae), Pteridium aquilinum (Filicinae)*

PARTRIDGE, T. A. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a Effects of antibodies on the behaviour of cells in tissue culture. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Treatment of cultured fibroblasts with monovalent antibody fragments (papain fragments) to test whether antibody-induced changes in cell behaviour can be attributed to agglutination. *Gallus domesticus (Aves)*

PASCAUD, M. Dr., Prof. — Inst. de Recherches Sci. sur le Cancer, C.N.R.S., B.P.No.8, VILLEJUIF 94, France
(no embryological work in progress)

PASCHMA, M. D.Sc. — Zaklad Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul. Sienkiewicza 21, WROCŁAW, Poland

PASCUAL-MORENILLA, Miss M. T. M.D. — Inst. F.Olóriz, Fac. de Med., Univ. de Granada, GRANADA, Spain

PASQUINI, P. Ph.D., Prof. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al policlinico), ROMA, Italy
a Growth and differentiation of regeneration blastema in vivo and in vitro. *Planaria torva, Dugesia etrusca (Turbellaria)* (in collaboration with H. MANELLI and Mrs. M. STAMPA (DI CASTRO))
b Growth and differentiation in regeneration. *Planaria* spec. *(Turbellaria)* (in collaboration with H. MANELLI)

PASSAPONTI, A. M.D., Prof. — Ist. di Anat. Umana Normale, 2ª Cattedra, Via Biblioteca 4, 95124 CATANIA, Italy
a The morphological aspect of embryo atrophy. *Homo sapiens (Primates)*
b The morphogenesis of anencephaly. *Homo sapiens (Primates)*
c The development of the inguinal canal. *Homo sapiens (Primates)*
d Structural changes of allantoic membrane epithelium submitted to the action of different agents. *Gallus domesticus (Aves)*

PASTEELS, J. J. M.D., Prof. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Univ., 97 rue aux Laines, BRUXELLES, Belgium

PASTISSON, C. Dr.en Biol. — Lab. de Biol. Gén., Fac. des Sci., B.P. 347, 51 REIMS, France

PATIL, T. L. M.S. — Dept. of Anat., Med. Coll., NAGPUR-3, M.S., India
a Regulatory process of mesoderm in limb morphogenesis; various presumptive areas at pre-axial and post-axial borders of limb bud/wing bud of stage 19-20 embryos are ablated. *Gallus domesticus (Aves)* (in collaboration with P. N. DUBEY)

PATRICOLO, Miss E. Dr.nat.sci. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a Enzymatic inhibitors in development. *(Ascidiae)*
b Cellular aggregation. *(Amphibia)*
c Action of dl-proline and its analogues on development. *(Ascidiae)*

PATTEN, B. M. Ph.D., Prof. (Emer.) — Dept. of Anat., Univ. of Michigan, East Med. Bldg., ANN ARBOR, Mich. 48104, U.S.A. •

PAUL, J. Ph.D. — The Beatson Inst. for Canc. Research, Royal Beatson Mem. Hosp., 132 Hill St., GLASGOW C.3, Scotland, U.K. •

PAUTOU (MÉRIC), Mrs. M. P. Dr.spéc. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Interaction between limb bud ectoderm and mesoderm in xenoplastic associations; study of the competition between mesoderm of two species. *Gallus domesticus, Anas boschas (Aves)*
b Interaction between wing and leg bud ectoderm and mesoderm in xenoplastic associations. *Gallus domesticus, Anas boschas (Aves)*

PAVAN, C. Ph.D., Prof. — Dept. of Zool., Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.
a DNA, RNA and protein synthesis in polytene chromosomes in development of normal and infected larvae. *(Sciaridae, Diptera)*

PAVÉ, A.-G. Ing., Dr.Spec. — Sect. de Biol. Génér. et Appl., Fac. des Sci. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Thermogenèse de l'oeuf. *Bombyx mori (Lepidoptera)*

PAVKOV, A. D. Dr.med. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. Rumânia, Bul.M.Viteazul 24, TIMIŞOARA, Rumania
a Pathogenesis of cardiac malformations. *Gallus domesticus (Aves)*
b Normal and pathological prenatal electrocardiography. *Gallus domesticus (Aves)*

PAWLOWITZKI, I. H. — Inst. für Humangenet. der Univ., Vesaliusweg 12/14, 44 MÜNSTER/Westf., W.Germany
a Chromosome analysis and isoenzyme determinations in spontaneous abortions. *Homo sapiens (Primates)*

PAWŁOWSKA, Mrs. M. — Dept. of Histol. and Embryol., Fac. of Vet. Med., Warsaw Agricult. Univ., ul. Grochowska 272, WARSZAWA, Poland

PAYEN, Miss G. G. — Lab. d'Evolution des Etres Organisés, Fac. des Sci., 105 Bd. Raspail, PARIS VIe, France
a Formation and development of the androgenic glands. Their control by neurosecretion. *Callinectes sapidus, Rhithropanopeus harrisii, Carcinus maenas (Brachyura, Decapoda, Crustacea)*
b Organogenesis of the genital apparatus in larval stages. *Rhithropanopeus harrisii, Callinectes sapidus, Carcinus maenas (Brachyura, Decapoda, Crustacea)*

PEDERSEN, K. J. Ph.D. — Inst. of Gen. Zool., Univ. of Copenhagen, 15 Universitetsparken, DK 2100 COPENHAGEN Ø, Denmark
a Formation of connective tissue filaments in regenerating animals. *Dugesia tigrina (Turbellaria)*
b Cytology and cytochemistry of starving animals. *Dugesia tigrina (Turbellaria)*
c Cellular basis for regeneration. *Lineus ruber (Nemertini)*

PEDERSEN, T. M.D. — Finsen Lab., Finsen Inst., 49 Strandboulevard, DK-2100 COPENHAGEN, Denmark
a Follicle growth and cell kinetics of the ovary in infancy, maturity and old age; during normal cycle, pregnancy and lactation; influence of gestagen (^{3}H-thymidine labelling and autoradiography). *Mus musculus (Rodentia)*

PEGRUM (HALL), Mrs. S. M. B.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
a Study of cell relations in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with M. ABERCROMBIE and Mrs. J. E. M. HEAYSMAN (WAKELING))

PEHLEMANN, F.-W. Dr. — Anat. Inst. der Univ., Neue Univ. Eingang F 1, 23 KIEL, W.Germany
a Ultrastructural morphogenesis of endocrine glands (adenohypophysis, adrenal, thyroid). *(Anura; Mammalia)*
b Ultrastructure of amitotic cell division. *(Anura; Mammalia)*

PEHRSON, G. T. Dr.phil., Prof. (Emer.) — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, Box 6801, S-113 86 STOCKHOLM, Sweden

PELLING, C. Dr. — Max-Planck Inst. für Biol., Abt.W.Beermann, Spemannstr. 34, 74 TÜBINGEN, W.Germany •

PÈNE, J. J. Ph.D. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A.

PENER, M. P. Ph.D. — Dept. of Entomol. and Venomous Anim., The Hebrew Univ., JERUSALEM, Israel

PENMAN, S. — Dept. of Biol.,, Massachusetts Inst. of Technol., CAMBRIDGE, Mass. 02139, U.S.A. •

PENTZ, S. Dr.phil. — Heiligenberg Inst., 7799 HEILIGENBERG, Baden, W.Germany
a Röntgeninduktion von Mutationen an Flügelschuppen. *Plodia interpunctella (Lepidoptera)*
b Induktionsbedingungen der larvalen Diapause. *Plodia interpunctella (Lepidoptera)*
PENZLIN, H. Dr.rer.nat. — Zool. Inst. der Univ., Universitätsplatz 2, ROSTOCK, East. Germany
PERA, L. M.D., Prof. — Ist. di Anat. e Istoembriol., Univ. di Pisa, Via Roma 55, 56100 PISA, Italy
PERDUE, Mrs. S. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a Nuclear degeneration during the terminal lens fiber cell differentiation in developing lens; histological and microspectrophotometric analysis. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)
PERKOWSKA (MOSER), Mrs. E. Ph.D. — Inst. of Anim. Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland, U.K.
PERLES, B. Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VIe, France
PERLMANN, H. P. Ph.D. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden
PERNARD, J.-C. — Div. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, CH-3000 BERN, Switzerland
a Mechanism of tissue involution during metamorphosis. *Xenopus laevis (Anura)* (in collaboration with R. WEBER)
PERRIER, Mrs. H. D.E.S. — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France
a Electron microscopic study of the foetal and perinatal pancreas. *Rattus norvegicus (Rodentia)*
PERRY, Miss M. M. B.Sc. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K.
a Study of certain features of developing embryos by electron microscopy. *(Amphibia)* (in collaboration with J. JACOB and C. H. WADDINGTON)
b Electron microscope studies of mutants. *Drosophila* spp. *(Diptera)* (in collaboration with C. H. WADDINGTON)
c Ultrastructural changes during growth. *Micrasterias thomasiana (Desmidoidea, Conjugales)* (in collaboration with C. H. WADDINGTON)
d Ultrastructural and experimental study of cleavage. *Triturus alpestris (Urodela), Xenopus laevis (Anura)* (in collaboration with G. G. SELMAN)
PERSAUD, T. V. N. M.D. — Dept. of Anat., Fac. of Med., Univ. of the West Indies, Mona, KINGSTON 7, Jamaica
a Developmental pathology and teratogenesis: embryopathic activity of the active principles contained in West Indian medicinal plants. *Rattus norvegicus, Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
b Effects of essential amino acid imbalances on embryogenesis. *Rattus norvegicus, Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
PERSONS, Miss B. J. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a Cellular replication during the development and growth of lens. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)
b The pattern of RNA synthesis during lens development. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)
PERSOV, G. M. Cand.biol.sci. — Biol. Inst., Leningrad State Univ., LENINGRAD B-164, U.S.S.R.
a Sex differentiation. *(Chondrostei; Teleostei)*
b The process of gametogenesis under ionizing radiations. *(Chondrostei; Teleostei)*
PERTUSA, J. Ph.D. —Inst. Biol. de Sarriá, Dr.Amigant 31, BARCELONA 17, Spain
PETERS, A. Ph.D., Prof. — Dept. of Anat., School of Med., Boston Univ., 80 E. Concord St., BOSTON, Mass. 02118, U.S.A.
a Electron microscopic study of the formation of myelin sheaths and development of neuroglial cells in the central nervous system. *Rattus domesticus (Rodentia)*
PETERS, Mrs. H. M.D. — Finsen Lab., Finsen Inst., 49 Strandboulevard, DK-2100 COPENHAGEN, Denmark
a Development of the ovary: morphology, cell dynamics and function. *Mus musculus (Rodentia)*
b The effect of hormones (testosterone propionate) on the development of the ovary in infancy. *Mus musculus (Rodentia)*
c Development of ovaries in the offspring of females irradiated before conception. *Mus musculus (Rodentia)*
PETERS, J. J. Ph.D., Prof. — Dept. of Biol., Xavier Univ., Victoria Parkway, CINCINNATI, Ohio 45207, U.S.A.
PETERS, N. W. Dr.rer.nat. — Inst. für Hydrobiol. und Fischereiwiss., Univ. Hamburg, Olbersweg 24, 2 HAMBURG-Altona 1, W.Germany

a Diapause and developmental pathology (effect of environmental factors on embryonic development). *Nothobranchius guentheri, Rivulus cylindraceus (Cyprinodontidae, Teleostei)*
b Effect of metabolic inhibitors on embryonic development. *Nothobranchius guentheri, Rivulus cylindraceus (Cyprinodontidae, Teleostei)*
c Development of eye-rudiments in cave-fish. *Astyanax mexicanus (Characinidae, Teleostei)*

PETERS, Th. Dr.med. — Anat. Inst. der Univ. Giessen, Friedrichstr. 24, 63 GIESSEN, W. Germany

PETIT, A. Lic.ès Sci. — Lab. de Zool. et d'Embryol. Expér., Univ. de Strasbourg, 12 rue de l'Université, STRASBOURG, France

PETRUCCI, D. — Dept. of Gen. Biol., Univ. of Sassari, SASSARI, Italy

PETRY, G. Dr.med., Prof. — Anat. Inst. der Univ., Robert Kochstr. 6, 355 MARBURG/Lahn, W.Germany

PEXIEDER, T. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
— temporarily: Inst. d'Histol. et d'Embryol., Univ. de Lausanne, 9 rue du Bugnon, 1005 LAUSANNE, Switzerland
a Normal development of the aortic arches. *Gallus domesticus (Aves)*
b Experimental morphology of the aortic arches and branchial arches. *Gallus domesticus (Aves)*
c Embryophysiology of the circulation in the aortic arches. *Gallus domesticus (Aves)*
d Cell death in the development of the heart. *Gallus domesticus (Aves)*

PFLUGFELDER, O. Dr.rer.nat., Prof. — Zool. Inst., Naturwissensch. Fak., Hochschule Hohenheim, 7 STUTTGART-Hohenheim, W.Germany
a Änderung des Stoffwechsels nach Störung des hormonalen Gleichgewichts. *(Insecta)*
b Einfluss der Pinealektomie auf die Postembryonalentwicklung. *(Teleostei)*
c Histophysiologie der Corpora allata nach experimenteller Beeinflussung. *(Insecta)*
d Wirkungsmechanismen von Thyreostatika. *Rana temporaria, Xenopus laevis (Anura), Lacerta* spec. *(Reptilia), Gallus domesticus (Aves)*
e Biomorphose.
f Egg formation in giant animals. *Carausius morosus (Phasmidoptera)*

PHILLIS, J. W. Ph.D. — Dept. of Physiol., Monash Univ., CLAYTON, Vict. 3168, Australia
a Descriptive morphology and histochemistry, and experimental morphology of the cerebellum (C.R. length 2 cm until after birth). *Felis domestica (Carnivora)*

PIATIGORSKY, J. Ph.D. — Lab. of Developm. Biol., Sect. on Exper. Embryol., Natl. Inst. of Child Health and Human Developm., Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A.
a The role of RNA in the development of the lens. *Gallus domesticus (Aves)*
b The regulation of protein synthesis in eggs and embryos. *(Echinoidea)*

PIATT, J. Ph.D. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

PICHERAL, B. Dr.3ème Cycle — Lab. de Biol. Gén., Fac. des Sci., 35 RENNES, France
a Nuclear transplantation. *(Amphibia)*
b Spermatogenesis. *(Amphibia)*

PICKWORTH, Miss S. Ph.D. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England
a Artificial activation of eggs, pronucleus formation. *Mesocricetus auratus (Rodentia)*

PIDDINGTON, R. L. Ph.D. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a Studies on a causal relationship in the embryo between the steroidogenic activity of the adrenal glands and the normal pattern of glutamine synthetase activity in the neural retina. *Gallus domesticus (Aves)*

PIEAU, C. Lic.ès Sci. — Serv. d'Embryol. Expér. de l'Inst. Pasteur, 20 rue des Moulins, 95 SANNOIS, France
a Researches on the mechanisms of sexual differentiation. *Cistudo europaea, Testudo graeca (Chelonia)*
b Researches on the establishment of urogenital connections and upon the development of the cloaca. *Anguis fragilis (Lacertilia)*
c Effects of X-rays on embryonic development. *Lacerta viridis, Anguis fragilis (Lacertilia)* (in collaboration with A. RAYNAUD)

PIERRO, L. J. Ph.D., Prof. — Dept. of Anim. Genet., Storrs Agric. Exper. Station, Univ. of Connecticut, STORRS, Conn. 06268, U.S.A.
a Chemical teratogenesis: inhibitors of nucleic acid and protein metabolism. *Gallus domesticus (Aves)*
b Gene interaction in the control of formation of specific melanin granules. *Mus musculus (Rodentia)*
c Eye development. *Mus musculus (Rodentia)*
d Developmental genetics. *Gallus domesticus (Aves)*

PIGHILLS, Miss E. B.Sc. — Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caern., Wales, U.K.
a Induction of chimaerism. *Rattus norvegicus, Mus musculus (Rodentia), Capra hircus, Ovis aries (Artiodactyla)*
b Experimental embryology. *Mus musculus (Rodentia)*

PIHAN, J. C. Agr.de Sc. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Catherine, 54 NANCY, France
a Etude expérimentale du développement post-embryonnaire du système trachéen. *(Brachycera, Diptera)* (en collaboration avec F. STÉPHAN)

PIJNACKER, L. P. Ph.D. — Genet. Inst., Univ. van Groningen, Rijksstraatweg 76, HAREN (Gr.), Netherlands
a Oogenesis, parthenogenesis, and teratogenesis. *Carausius morosus, Bacillus rossii (Phasmidoptera), (Acari, Arachnida)*

PIKÓ, L. Ing.Agr., D.V.M. — Dept. of Developm. Biol., Div. of Biol., Calif. Inst. of Technol., PASADENA, Calif. 91109, U.S.A.

PILKINGTON, J. B. Ph.D. — Dept. of Zool., Univ. of Otago, DUNEDIN, New Zealand
a Calcification in metamorphosis. *(Amphibia)*
b Calcification. *(Echinoidea)*

PILLERI, G. Dr.med. — Hirnanat. Inst. der Psychiatr. Univ. Klinik Bern, 3072 OSTERMUNDIGEN-BE, Switzerland
a Entwicklung des Gehirns. *Castor canadensis (Rodentia)*
b Über die Protuberantia sclerae am embryonalen Auge. *Homo sapiens (Primates)*
c Ontogenese des Auges. *Balaenoptera physalus, B. acutorostrata, Megaptera novaeangliae, Delphinus delphis, Tursiops truncatus, Delphinapterus leucas (Cetacea)*
d Entwicklung der Körperform. *Balaenoptera physalus, B. acutorostrata, Megaptera novaeangliae, Delphinus delphis, Tursiops truncatus, Delphinapterus leucas (Cetacea)*
e Ontogenese des Zentralnervensystems. *Balaenoptera physalus, B. acutorostrata, Megaptera nodosa, Delphinus delphis, Tursiops truncatus, Delphinapterus leucas (Cetacea)*
f Ontogenesis (especially nervous system). *Globicephala melaena (Odontoceti, Cetacea)*

PINAMONTI, S. Dr.Biol. — Ist. di Zool., Univ. di Ferrara, Via Previati 24, 44100 FERRARA, Italy

PINEAU, H. — Lab. d'Anat., Fac. de Méd., 45 rue des Sts. Pères, 75 PARIS VI, France

PINET, J.-M. Dr.3e Cycle — Inst. Natl. Agronomique, Lab. de Zool., 16 rue Claude-Bernard, 75 PARIS Ve, France
a Studies of the development of the maxillary stylet (fine structure, histochemistry of the styligenic organ). *Rhodnius prolixus (Reduviidae, Heteroptera)*
b Potentiality of the cells of the styligenic organ according to their sites. *Rhodnius prolixus (Reduviidae, Heteroptera)*
c Development of the integument, especially studies of the chitinogenic cell of the maxillary bud. *Rhodnius prolixus (Reduviidae, Heteroptera)*

PINOT, Miss M. Dr.ès. Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France
a Etude de la croissance et de la différenciation du bourgeon de membre in vitro. *Gallus gallus (Aves)*
b Rapports mésenchyme axial - mésenchyme latéral dans l'organogenèse du membre. *Gallus gallus (Aves)*
c Régulation tardive du membre. *Gallus gallus (Aves)*

PLAS, Mrs. C. Dr.3e Cycle — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France
a Pre- and postnatal changes in glucose and glycogen metabolism of the liver cell: in vivo and in isolated cultured hepatocytes. *Rattus norvegicus (Rodentia)* (in collaboration with R. L. JACQUOT)

PLASOTA, K. J. M.Sc. — Inst. of Zool., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a Development of the skull. *Rana terrestris, R. esculenta, R. temporaria, Bufo* spec., *Pelobates fuscus (Anura)*

PLEEGING, J. H. Med.Drs. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands

PLESNER, P. M.D., Prof. — Dept. of Molec. Biol., Odense Univ., 230 Hjallesevej, 5000 ODENSE, Denmark
a The formation of ribosomes. *Tetrahymena* spec. *(Ciliata)*

POHLEY, H. J. Dr., Prof. — Inst. für Entw.physiol., Univ. zu Köln, Gyrhofstr. 17, 5 KÖLN-Lindenthal, W.Germany
a Theoretische und experimentelle Untersuchungen über 1) Regeneration und Häutung, 2) Regulation des Zellteilungswachstums. *Ephestia kühniella (Lepidoptera), Periplaneta americana (Orthoptera)*
b Modelldarstellung entwicklungsphysiologischer Systeme mit Hilfe von programmgesteuerten Rechenanlagen

POLEZHAEV, L. V. Dr.biol.sci., Prof. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R. •

a Regeneration of cranium bones. *Mus domesticus, Rattus norvegicus, Oryctolagus cuniculus, Felis domestica, Canis familiaris (Mammalia)*

b Regeneration of dental tissue. *Canis familiaris (Carnivora)*

c Regeneration of myocardium. *Rattus norvegicus, Oryctolagus cuniculus, Felis domestica, Canis familiaris (Mammalia)*

d Restoration of regeneration capacity of limbs after X-irradiation. *Ambystoma mexicanum (Urodela)* (in collaboration with Miss N. A. TEPLITZ and Mrs. S. J. TUCHKOVA)

e Physiological regeneration of the brain. *Felis domestica, Rattus norvegicus (Mammalia)*

POLGE, C. Ph.D. — A.R.C. Unit of Reprod. Physiol. & Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England

a Factors influencing fertilization and early embryonic development (effects of age of gametes, administration of drugs and hormones, in vitro treatments and transplantations). *Sus scrofa (Artiodactyla)*

POLLARD, D. R. Ph.D. — Dept. of Genet., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Rd. & Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

a A study of the morphogenetic movement involved in closure of the secondary palate with special reference to strain differences in response to the cleft palate-producing effect of 6-aminonicotinamide. *Mus musculus (Rodentia)*

b The role of cytoplasmic genes in development. *Mus musculus (Rodentia)*

POLTEVA, Mrs. D. G. — Dept. of Embryol. Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

a Somatic embryogenesis and regeneration. *Metridium senile fimbriatum, Anthopleura* spec. *(Zoantharia, Actinozoa)*

b Action of neuropharmaca on somatic embryogenesis. *Metridium senile dianthus (Zoantharia, Actinozoa)*

c Dedifferentiation of cells during morphogenetical processes in regeneration and somatic embryogenesis. *Metridium senile dianthus (Zoanthara, Actinozoa)*

PONTIER, J. Dr.ès Sci. — Sect. de Biol. Gén. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France

a Analyse factorielle appliquée à l'étude de la morphogenèse. *Myzus persicae (Aphididae, Rhynchota)*

POPOV, V. V. Dr.biol.sci., Prof. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

POPP, R. A. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Ontogeny of variant forms of esterases in tissues; qualitative and quantitative chacteristics of allelic forms of esterases studied by starch and/or acrylamide gel electrophoresis. *Mus musculus (Rodentia)*

b Compensatory effect of multiple esterases owing to the action of null genes. *Mus musculus (Rodentia)*

PORCELLI, Miss F. Dr. — Inst. of Histol. and Embryol., Univ. of Pavia, Piazza Botta 10, 27100 PAVIA, Italy

a Histology, histochemistry and enzymology of yolk sac (pre- and postembryonic stages). *Salmo irideus (Salmonidae, Teleostei)*

PORTER, K. R. Ph.D., Prof. — Biol. Labs., Harvard Univ., 16 Divinity Ave., CAMBRIDGE, Mass. 02138, U.S.A. •

PORTMANN, A. Dr.Phil., Prof. (Emer.) — Zool. Anstalt der Univ., Rheinsprung 9, 4000 BASEL, Switzerland

a Embryology. *(Opisthobranchia, Prosobranchia, Gastropoda; Aves; Mammalia)*

b Morphological analysis of early postembryonic development. *(Rodentia; Insectivora)*

PORTMANN, Miss A.-M. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Cathérine, 54 NANCY, France

POTEMKINA, Mrs. D. A. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

POULSON, D. F. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A. •

a Mid-gut: genesis and differentiation. *Drosophila melanogaster (Diptera)*

b Chromosomal control of differentiation. *Drosophila melanogaster (Diptera)*

c Neurogenesis in normal and genetically deficient embryos. *Drosophila melanogaster (Diptera)*

d Maternally inherited sex-ratio disturbances of development. *Drosophila melanogaster, D. bifasciata, D. willistoni, D. nebulosa, D. equinoxialis, D. robusta (Diptera)*

e Developmental genetics. *Drosophila melanogaster (Diptera)*

POURHADI, R. M.D. — Lab. d'Histol.-Embryol., Fac. de Méd., Bd. Winston Churchill, B.P. 38, 63 CLERMONT-FERRAND, France

a Action of ultrasound on embryonic organisms. *Triturus helveticus (Urodela)*

b Cytology of neonatal liver; differentiation of intercellular junctions, characters of microbodies; histochemical differentiation. *Mus musculus (Rodentia)* (in collaboration with J. P. TURCHINI and P. MALET)

POURREAU (SCHNEIDER), Mrs. N. M. Dr.ès Sci. — Lab. d'Embryol. expér. du Coll. de France et du C.N.R.S., 11 Place M. Berthelot, PARIS Ve, France •

a Use of organ culture and suspension culture techniques for the study of functional testicular interstitial cell tumors. *Mus musculus, Rattus norvegicus (Rodentia)*

b Establishment of cell lines from a rat testicular interstitial cell tumor for studies on the functional capacities of isolated Leydig tumor cells. *Rattus norvegicus (Rodentia)*

c Effect of testicular interstitial cell tumor explants on prostate from 6 week old animals in organ co-culture. *Rattus norvegicus (Rodentia)*

d Attempts to obtain sex transformation in embryonic gonads by association with Leydig cell tumors in organ culture. *Rattus norvegicus (Rodentia)*

POURTOIS, M. M.D., Lic.Sc.Dent. — Lab. d'Embryol., Inst. d'Anat., Univ. de Bruxelles, 97 rue aux Laines, BRUXELLES 1, Belgium

a Normal and abnormal closure and fusion of primary and secondary palate (tissue culture, histochemistry, histology). *Rattus norvegicus, Mus musculus (Rodentia), Homo sapiens (Primates)*

b Morphogenesis and cytogenesis of tooth buds. *Rattus norvegicus, Mus musculus (Rodentia)*

PRAHLAD, K. V. Ph.D., Prof. — Dept. of Biol. Sci., Northern Illinois Univ., DeKALB, Ill. 60115, U.S.A.

a Study of induced metamorphosis: histological maturity and the development of tissue sensitivity to thyroid hormones in the embryo; biochemical changes evoked by thyroid hormones in embryonic and adult susceptible tissues. *Ambystoma mexicanum, A. tigrinum, Necturus maculosus (Urodela)*

b Comparative study of hypothalamo-pituitary-thyroid axis in pre- and post-metamorphic animals. *Ambystoma mexicanum, A. tigrinum, Necturus maculosus (Urodela)*

PRASAD, M. R. N. Ph.D., Prof. — Dept. of Zool., Univ. of Delhi, DELHI 7, India

PRASDNIKOV, E. Cand.med.sci. — Dept. of Embryol., Murmansky Sea-Biol. Inst., Acad. of Sci., DALNII ZELENZI, U.S.S.R.

PRATT, C. W. McE. M.D. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England

a Development of skeletal tissue.

PRAY, T. R. Ph.D., Prof. — Dept. of Biol. Sci., Univ. of Southern California, University Park, LOS ANGELES, Calif. 90007, U.S.A.

a Development of the gametophytes and juvenile stages of the sporophytes. *(Cheilantheae, Pteridaceae, Filicinae)*

b Development of the vein systems of leaves. *Anemia* spec., *Marsilea* spec., *Cyrtomium* spec., *Acrostichum* spec. and other spp. *(Filicinae)*

c Investigation of factors controlling planes of cytokinesis in early gametophyte development. *Cheilanthes* spp. *(Pteridaceae, Filicinae)*

PRCHAL, J. F. M.D. — Biochem. Dept., Med. School, Dalhousie Univ., Sir Charles Tupper Building, HALIFAX, N.S., Canada

a Regulation of synthesis of hemoglobin and blood proteins in the embryo by transfer RNA. *Gallus gallus (Aves)*

PREDA, V. G. M.D., Prof. — Cat. de Biol., Inst. Medico-Farmaceutic, Str. Pasteur 6, CLUJ, Rumania

a Influence de la température d'incubation sur l'infrastructure et l'immunomorphologie de l'embryon. *Gallus* spec. *(Aves)*

b Affrontation d'organes embryonnaires in vitro. *Mus rattus (Rodentia)*

c Action de l'hormone gonadotrope choriale sur la différenciation sexuelle des canaux de Müller. *Gallus* spec. *(Aves)*

PRESCOTT, D. M. Ph.D., Prof. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A.

PRESLEY, R. M.B., B.Chir. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England

a Tissue culture and embryogenesis. *(Mammalia)*

b Ultrastructure of embryos. Various spp. *(Rodentia)*

c Fertilization; kinetics and nature of block to polyspermy. *(Echinodermata)*

PRESS, N. Ph.D., Prof. — Dept. of Zool., Univ. of Wisconsin, MILWAUKEE, Wis. 53201, U.S.A.

a Transfer of macromolecules from follicle cells to developing oocytes. *(Aves)*

b Unusual organelles in the ovary. *(Aves)*

c Respiration of oocytes. *(Aves)*

PRESTIGE, M. C. M.A. — Physiol. Dept., Med. School, Univ. of Edinburgh, Teviot Place, EDINBURGH 8, Scotland, U.K.

PRICE, Miss D. Prof. (Emer.) — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A. •

a The development of endocrines in embryonic systems

PRIESTER, W. de M.Sc. — Zool. Lab., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands
a Electron microscopic studies of developmental stages. *Calliphora erythrocephala (Diptera)*
PRINS, H. J. — Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Analysis of fracture-repair. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)
PRITCHARD, E. T. Ph.D., Prof. — Dept. of Oral Biol., Univ. of Manitoba, WINNIPEG, Manitoba, Canada
a Cholesterol esterase activity in developing brain. *Rattus norvegicus (Rodentia)*
b Lipid content of developing salivary gland and possible role in secretion. *Rattus norvegicus (Rodentia)*
PROPPER, A. Doct.3e Cycle — Lab. de Zool., Inst. des Sci. Nat., Fac. des Sci., Place Maréchal Leclerc, 25 BESANÇON, France
a Organogenèse de la glande mammaire par la méthode des cultures d'organe et des greffes embryonnaires. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)* (en collaboration avec L. GOMOT)
PROVENZANO, A. J. Ph.D., Prof. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, Virginia Key, MIAMI, Fla. 33149, U.S.A.
PRUDHOMME, J. C. Dr.Spec. — Sect. de Biol. Gén. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Culture d'organes in vitro. *Bombyx mori (Lepidoptera)*
PUCCIA, E. D.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a RNA synthesis in embryonic development. *(Ascidiae)*
b The biochemistry of regeneration. *(Annelida)*
PUCCINELLI, Mrs. I. Dr.Nat.Sci. — Ist. di Zool. e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy
a Development and cytology. *(Tricladidea, Turbellaria; Hirudinea, Annelida)*
PURKO, J. Ph.D., Prof. — Dept. of Zool., Coll. of Sci., Univ. of Western Ontario, LONDON, Ont., Canada
a Biological action of alkylating agents (sulphur and nitrogen mustards) and mechanism of resistance to their effects in embryos and in fibroblasts grown in culture. *(Teleostei), Mus musculus (Rodentia)*
b Mechanisms underlying processes in early embryogenesis and cell division, using various metabolic inhibitors of DNA, RNA and proteins, and correlating their biological and biochemical effects. *(Teleostei)*
c Biological action of the "chemosterilant" hempa (hexamethylphosphoric triamide) and mechanism of resistance to its effects in embryos and in fibroblasts grown in culture. *(Teleostei), Mus musculus (Rodentia)*
PŮŽA, V. C.Sc. — Dept. of Biol., Med. Fac., Charles Univ., Šimkova 870, HRADEC KRÁLOVÉ, Czechoslovakia
a Muscle cell development in tissue culture (amitosis, origin and causes of multinuclearity). *Gallus domesticus (Aves), Rattus norvegicus, Mus musculus (Rodentia)*
b Nucleolus during myogenesis in vitro studied by phase-contrast time-lapse cinematography. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)* (in collaboration with J. GAYER and M. HROCH)
PUŽANOVÁ, Mrs. L. MUDr., C.Sc. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a Development of the internal structure of muscles. *Rattus albus (Rodentia), Homo sapiens (Primates)*
PYLILO, Miss I. V. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.
a Regeneration. *Beroe cucumis (Ctenophora)*
QUAGLIA, A. Dr.nat.sci. — Ist. di Anat. Comp., Univ. di Bologna, Via Belmeloro 8, BOLOGNA (103), Italy
QUEVEDO, W. C., Jr. Ph.D., Prof. — Div. of Biol. and Med. Sci., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.
a Genetic regulation and developmental variations of multiple forms of tyrosinase in melanocytes. *Mus musculus (Rodentia)*
RABAEY, M. M.D., Prof. — Ophthalmol. Clinic, Univ. Hosp., De Pintelaan, GENT, Belgium
RADECKA, Mrs. E. ERDMAN D.Sc. — Zaklad. Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul.Sienkiewicza 21, WROCŁAW, Poland
RADO (LUSER), Mrs. G. D.Sc. — Ist. di Zool. e Anat. Comp., Univ. di Trieste, Via Alfonso Valerio, 32 TRIESTE, Italy
a Bidder's organ differentiation. *Bufo bufo (Anura)*
RADOS, I. D.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary
a Early morphogenesis. *Gallus domesticus (Aves)*

RADZIKOWSKI, St. M.Sc. — Inst. of Zool., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a Studies on DNA and RNA synthesis. *Chilodonella cucullulus (Ciliata)*
b Conjugation and polytene chromosomes in the exconjugants. *Chilodonella cucullulus (Ciliata)*

RADZINSKAYA, Miss L. I. Cand.biol.sci. — Lab. of Developm. Biophys., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

RAEKALLIO, J. M.D., Prof. — Dept. of Forensic Med., Univ. of Turku, Kiinamyllynkatu 10, TURKU 3, Finland
a Biochemical characterization of enzymes appearing in early wound healing. *Rattus* spec., *Cavia* spec. *(Rodentia)* (in collaboration with P.-L. MÄKINEN)
b Histochemical studies on bone regeneration (fracture healing). *Rattus* spec., *Cavia* spec. *(Rodentia)* (in collaboration with P.-L. MÄKINEN)

RAFFERTY, K. A., Jr. Ph.D., Prof. — Dept. of Anat., School of Med., Johns Hopkins Univ., 709 N. Wolfe St., BALTIMORE, Md. 21205, U.S.A.

RAGOZINA, Mrs. M. N. Dr.biol.sci. — Inst. of Evol. Morphol. and Ecol. of Anim., Acad. of Sci. of the U.S.S.R., Lenin Ave. 23, MOSCOW V-71, U.S.S.R.

RAISMAN, J. S. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina
a Lytic substances in spermatozoa. *Bufo arenarum (Anura)*

RAJTOVÁ, Miss V. M.V.Dr. — Anat. Inst. der Vet.-Med. Fak., Komenského 71, KOŠICE, Czechoslovakia
a Ossifikation des Skeletts, insbesondere des Primordialkraniums. *Cavia porcellus (Rodentia)*

RAMASWAMI, L. S. D.Sc., Prof. — Dept. of Zool., Univ. of Rajasthan, JAIPUR, India

RAMENSKAYA, Mrs. G. P. Cand.biol.sci. — Lab. of Developm. Cytogenet., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

RAMSEY, Miss E. M. M.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Placentation; study of placental structure, development and vasculature. *Macaca mulatta, Homo sapiens (Primates)*
b Determinations of blood, amniotic and intervillous space pressures throughout pregnancy. *Macaca mulatta (Primates)*
c Anatomical and radiological studies of circulation in the maternal placenta. *Macaca Mulatta, Homo sapiens (Primates)* (in collaboration with M. W. DONNER and H. R. MISENHEIMER)

RAMUS, J. S. Ph.D. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Experimental determination of environmental factors which induce morphogenesis: the formation of a fleshy "bud" from a filamentous juvenile. *Pseudogloiophloea confusa (Nemaliales, Florideophycidae, Rhodophyta)*

RANGA RAO, K. Ph.D. — Dept. of Biol., Tulane Univ., NEW ORLEANS, La. 70118, U.S.A.
a The responses of chromatophores of zoea, megalopa and adult to purified chromatophorotropins. *Uca pugilator (Decapoda, Crustacea)*
b A study on the control of pigmentation in regenerating appendages. *Uca pugilator, Cambarellus shufeldti (Decapoda, Crustacea)*

RANZI, S. Ph.D., Prof. — Lab. di Zool., Univ. di Milano, Via Celoria 10, 20133 MILANO, Italy

RANZOLI, F. Dr., Prof. — Ist. di Zool., Univ. di Catania, Via Androne 81, 95124 CATANIA, Italy
a Gametogenesis and sexuality. *Electra posidoniae (Ctenostomata, Bryozoa)*

RAO, K. V. M.Sc. — Dept. of Zool., Univ. of Delhi, DELHI-7, India

RAO, S. R. V. Ph.D. — Dept. of Zool., Univ. of Delhi, DELHI-7, India

RAPOLA, M. H. J. M.D. — Children's Hospital, Univ. of Helsinki, 11 Stenbäck St., HELSINKI 29, Finland
a Sex tract differentiation; organ culture. *Mus musculus (Rodentia)*
b Teratology. *Homo sapiens (Primates)*

RAPPAPORT, R., Jr. Ph.D., Prof. — Dept. of Biol. Sci., Union College, SCHENECTADY, N.Y. 12308, U.S.A.
a Comparative micrurgical studies on cytokinesis: extending present methods to a variety of experimental material and devising new forms of physical experimentation. *Marinogammarus obtusatus (Gammaridae, Crustacea), Echinarachnius parma (Echinoidea), Rana pipiens (Anura)*

RASCH (MYRBERG), Mrs. E. M. Ph.D., Prof. — Dept. of Biol., Marquette Univ., 530 North 15th St., MILWAUKEE, Wis. 53233, U.S.A.
a Atypical nucleoprotein synthesis during larval development. *Sciara coprophila (Diptera)*
b Cytochemistry and fine structural analysis of puffs in giant chromosomes. *Sciara coprophila (Diptera)*

RAUNICH, L. Ph.D., M.D., Prof. — Ist. di Anat. Comp., Univ. di Ferrara, Via Scienze 17, 44100 FERRARA, Italia

a Morphological and biochemical aspects of embryonic and foetal blood cell differentiation. *(Vertebrata)*

b Hemopoietic factors during development. *(Anura), Gallus gallus (Aves)*

RAVEN, Chr. P. Ph.D., Prof. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands •

a Maturation divisions of eggs. Various spp. *(Gastropoda)*

b Application of information theory to oogenesis and embryonic development.

c Morphology of the head region in cyclocephalic embryos. *Limnaea stagnalis (Gastropoda)*

d Cortical morphogenetic field and early ooplasmic segregation. Various spp. *(Gastropoda)*

e Transfer of information from egg follicle to oocyte. Various spp. *(Gastropoda)*

RAWLES (SPURBECK), Mrs. M. E. Ph.D. — 4000 North Charles St., BALTIMORE, Md. 21218, U.S.A. •

a The origin and development of regional specialization in the integumentary system. *Gallus gallus (Aves)*

RAY, A. K. M.Sc. — Cell Research Unit, Dept. of Zool., Univ. Coll. of Sci. and Technol., 35 Ballygunje Circular Rd., CALCUTTA-19, India

RAYCHOWDHURI, S. M.Sc. — Cell Research Unit, Dept. of Zool., Univ. Coll. of Sci. and Technol., 35 Ballygunje Circular Rd., CALCUTTA-19, India

RAYMOND, G. M.ès Physiol. — Lab. de Physiol. Anim., Fac. des Sci., Univ. de Poitiers, 40 Av. de Recteur Pineau, 86 POITIERS, France

a Ionic contents of the embryonic heart. *Rattus norvegicus (Rodentia)*

RAYNAUD, A. Dr.ès Sci. — Serv. d'Embryol. Expér. de l'Inst. Pasteur, 20 rue des Moulins, 95 SANNOIS, France •

a Researches on the normal development of the genital tract in the embryo. *Anguis fragilis, Lacerta viridis (Lacertilia); Tropidonotus tessellata, Vipera aspis (Ophidia)*

b Effects of the destruction with X-rays of the anlage of the hypophysis. *Anguis fragilis (Lacertilia)*

c Researches on the rotation of the egg in the uterus and the orientation of the axis of the embryo. *Anguis fragilis (Lacertilia)*

d Researches on the development of the limb buds *(Lacerta viridis, L. sicula)* and on the factors involved in the arrest of development of limb buds. *Anguis fragilis (Lacertilia)*

e Researches on the development of the phallus. *Lacerta viridis, Anguis fragilis (Lacertilia), Tropidonotus tessellata (Ophidia)*

f Researches on the function of endocrine glands in the embryo. *Anguis fragilis, Lacerta viridis (Lacertilia), Tropidonotus tessellata (Ophidia)*

g Researches on the capacities of differentiation in vitro of anlagen of the genital tract. *Anguis fragilis, Lacerta viridis (Lacertilia), Tropidonotus tessellata (Ophidia)*

h Effects of sexual and gonadotropic hormones on the sexual differentiation of the embryo. *Anguis fragilis, Lacerta viridis (Lacertilia), Tropidonotus tessellata (Ophidia)*

i Comparative embryology of the phallus. *(Lacertilia; Chelonia)* (in collaboration with C. PIEAU)

j Research on RNA and DNA synthesis of epidermal and mesodermal cells in the limb buds. *Anguis fragilis, Lacerta viridis (Lacertilia)* (in collaboration with J. VASSE)

k Effects of X-rays on embryonic development. *Lacerta viridis, Anguis fragilis (Lacertilia)* (in collaboration with C. PIEAU)

RAYNAUD (CHAULIN-SERVINIERE), Mrs. J. Dr.ès Sci. — Serv. d'Embryol. Expér. de l'Inst. Pasteur, 20 rue des Moulins, 95 SANNOIS, France

a Histochemical researches on the functional differentiation of the endocrine glands in the embryo. *Anguis fragilis (Lacertilia)*

b Culture in vitro of the anlage of the sub-maxillary gland. *Mus musculus (Rodentia)*

c Histochemical researches on the limb bud. *Anguis fragilis, Lacerta viridis (Lacertilia)*

RAZEK, H. A. M.D. — Dept. of Anat., Univ. of Bern, 26 Bühlstr., CH-3012 BERN, Switzerland

a Comparative placentation. *(Mammalia)*

REAMS, W. M., Jr. Ph.D., Prof. — Dept. of Biol., Univ. of Richmond, RICHMOND, Va. 23173, U.S.A.

a Effects of tissue environment on pigment cell morphogenesis. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

b Factors affecting pigment behaviour in the skin. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

c The Langerhans cell: origin and differentiation. *Mus musculus (Rodentia)*

d Immunochemical studies on the origin of Langerhans cells. *Mus musculus (Rodentia)*

REDMAN, R. S. Ph.D., Prof. — Dept. of Oral Biol., School of Dent., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

a Development of parotid gland from appearance of anlage in utero to adult or mature state (100 days postnatally): correlation of biochemical (exocrine enzymes, protein, RNA and DNA in crude homogenates of the gland) and morphologic (light and electron microscopic) observations; effects of dietary changes on the developmental pace. *Rattus rattus (Rodentia)*

REEDER, R. H. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

a Regulation of nucleic acid synthesis in early development. *Xenopus laevis (Anura)*

REES (WALLEY), Mrs. L. J. Ph.D. — Marine Sci. Labs., Univ. Coll. of N. Wales, MENAI BRIDGE, Anglesey, Wales, U.K.

REESE, D. H. M.S. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Mechanism of in vitro activation of RNA synthesis in the iris. *Triturus viridescens (Urodela)*

b Control of depigmentation in iris cells in culture. *Triturus viridescens (Urodela)*

REMBOLD, H. Dr.rer.nat., Pr.Doz. — Max-Planck-Inst. f. Biochem., Goethestr. 31, 8-MÜNCHEN-15, W.Germany

a Isolation of the determining principles from royal jelly, responsible for queen establishment. *Apis mellifica (Hymenoptera)*

b Biochemical aspects of queen determination; comparative studies on enzyme activities, mitochondria, protein and nucleic acid synthesis in queens and workers. *Apis mellifica (Hymenoptera)*

c Biochemical function of biopterin in development; metabolic studies with C^{14}-pteridines. *Apis mellifica (Hymenoptera)*

REMENAR, M. M.D. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia

a Submicroscopic and cytochemical studies on cleavage. *Mus rattus (Rodentia)*

RENFREE, Miss M. B. B.Sc. — Dept. of Zool., School of Gen. Studies, Australian Nat. Univ., P.O. Box 4, CANBERRA, A.C.T. 2600, Australia

a Physiology of the placenta. *Macropus eugenii (Marsupialia)*

RENNELS, E. G. Ph.D., Prof. — Dept. of Anat., The Univ. of Texas Med. School at San Antonio, 7703 Floyd Curl Drive, SAN ANTONIO, Tex. 78229, U.S.A.

a The effect of benzpyrene feeding on reproduction; gross malformations. *Mus norvegicus albinus (Rodentia)*

REPORTER, M. C. Ph.D. — Charles F. Kettering Research Labs., 150 E. South College St., YELLOW SPRINGS, Ohio 45387, U.S.A.

a Metabolic characteristics of the early embryo. *Gallus domesticus (Aves)*

b Energy transfer processes in the early embryo and in monolayer cultures. *Gallus domesticus (Aves)*

c Energy transfer processes in cell-cell interactions in monolayer cultures. *Rattus rattus (Rodentia)*

RESSOUCHES (SELMÈS), Mrs. A.-P. Dr.Biol.anim. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France

a Développement embryonnaire. *Pissodes* spec. *(Coleoptera)*

REVERBERI, G. D.Sc., Prof. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy •

a The role of some enzymes in embryonic development. (marine *Invertebrata)*

b Free amino acids in embryonic development.

c Analysis of eggs by electron microscopy. (marine *Invertebrata)*

RÉVÉSZ-FERENCZY, Mrs. E. M.D. — Dept. of Anat., Univ. of Bern, 26 Bühlstr., CH-3012 BERN, Switzerland

a Radiobiology, normal embryology. *Homo sapiens (Primates)*

b Radiobiology, experimental embryology. 1. genetics; 2. placentology. *Mesocricetus auratus (Rodentia)*

REYER, R. W. Ph.D., Prof. — Dept. of Anat., Med. Center, West Virginia Univ., MORGANTOWN, W.Va. 26506, U.S.A. •

a An experimental analysis of lens regeneration: a study of the causal mechanisms involved in lens regeneration from the dorsal iris and their relation to the processes of lens induction in the embryo. *Triturus viridescens, Ambystoma punctatum (Urodela)*

b A study of the coordinate induction systems operating in the development of the embryonic lens. *Triturus viridescens, Ambystoma punctatum, A. mexicanum (Urodela)*

c Studies on DNA synthesis, cell division and cell migration during lens and neural retina regeneration using thymidine-H^3. *Triturus viridescens (Urodela)*

d A study of stimulating factors common to lens and limb regeneration. *Triturus viridescens (Urodela)*

REYNAUD, G. R. Dr.spéc. — Lab. de Morphogénét. Anim., Fac. des Sci., 1 Place Victor Hugo, 13 MARSEILLE 3, France

a Etude des relations entre soma et germen. *(Aves)*

REYNOLDS, S. R. M. Ph.D., D.Sc., Prof. (Emer.) — Dept. of Obstet. and Gynecol. Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

a Fetal vascular physiology. *Homo sapiens, Lepus* spec., *Ovis* spec. *(Mammalia)*
b Uterine contraction patterns. *Homo sapiens (Primates)*
c Pulmonary vasculature, fetal and neonatal condition. *Cavia* spec. *(Rodentia), Ovis* spec. *(Artiodactyla)*
d Architecture of umbilical blood vessels, distended and nondistended. *Homo sapiens (Primates)*
e Development of chemoreceptor function. *Ovis* spec. *(Artiodactyla)*
f Sensory input and homeostasis related to fetal adaptation to intra-uterine environment. *Ovis* spec. *(Artiodactyla)*
g Effect of psychobiological stress and ageing on fertility. *Rattus rattus (Rodentia)*
h Placentogenesis. *Macaca mulatta, Homo sapiens (Primates)*
i Placental blood flow. *Macaca mulatta (Primates)*

REYNOLDS (KING), Mrs. W. A. Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W.Polk St., CHICAGO, Ill. 60612, U.S.A.
a Metamorphosis: uptake and localization of thyroxine in tissues and cells, histochemistry of adenohypophysis, collagen deposition. *Rana pipiens (Anura)*
b Fetal environment: fetal contributions to amniotic fluid, transport of insulin and cyclamate by hemochorial placenta. *Macaca mulatta, M. speciosa (Primates)*

REYSS-BRION (DUCREAU), Mrs. M. Dr.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
a Influence des rayons X sur le développement embryonnaire. *Pleurodeles waltlii (Urodela), Gallus* spec. *(Aves)*
b Influence des rayons X sur le pouvoir inducteur de la gastrula. *Pleurodeles waltlii (Urodela)*
c Etude de l'effet des rayons X sur le développement de la peau embryonnaire. *Gallus domesticus (Aves)*

REZENDE, Miss E. S. B.Sc. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4°andar, C.P. 253, BELO HORIZONTE, M.G., Brazil
a Study of the nuclear size and DNA content (cytophotometry) of different organs in embryo and larva. *Ascidia nigra (Ascidiae)*
b Study of the DNA synthesis with autoradiography and cytophotometry of endometrium, myometrium and placenta. *Mus musculus (Rodentia)*

REZNIK, M. M.D. — Lab. d'Anat. Pathol., Fac. de Méd., Univ. de Liège, 1 rue des Bonnes-Villes, LIÈGE, Belgium
(no embryological work in progress)

RIBBERT, D. — Zool. Inst. der Westf. Wilhelms-Univ., Badestr. 9, 44 MÜNSTER/Westf., W.Germany
a Gene activation during morphogenesis in the bristle-forming cells of species possessing polytene chromosomes. *Calliphora erythrocephala, Sarcophaga carnaria (Diptera)*

RICE, A. L. Ph.D. — Dept. of Zool., British Museum (Nat. Hist.), Cromwell Rd., LONDON S.W.7, England
a Development of laboratory reared animals. *Homona barbata, Dromia personata, Corystes cassivelaunus (Decapoda, Crustacea)*

RICHARDS, Mrs. C. M. Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
a The production of inbred strains using gynogenetic techniques of two types: 1. combination of egg nucleus plus second polar body. 2. inhibition of the first cleavage of a haploid egg to produce completely homozygous diploids. *Rana pipiens (Anura)*
b A study of the genetics of various mutants including albino, blue, melanoid, as well as mutants uncovered by gynogenesis. *Rana pipiens (Anura)*

RICHTER, R. H. H. Ph.D. — Univ.-Frauenklinik, Schanzeneckstr. 1, BERN, Switzerland

RICKENBACHER, J. Dr.med., Prof. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH, Switzerland

RIECK, A. F. Ph.D., Prof. — Dept. of Physiol., School of Med., Marquette Univ., 561 N. 15th St., MILWAUKEE, Wis. 53233, U.S.A.
a Studies about levels of control during early development (through early gastrula), using ultraviolet as a damaging agent. *Echinarachnius parma (Echinoidea)*
b Differentiation of epidermal cells under conditions of cell renewal following injury. *Mus musculus (Rodentia)*

RIEGERT, P. W. Ph.D. — Dept. of Biol., Univ. of Saskatchewan, Regina Campus, REGINA, Sask., Canada

RIKMENSPOEL, R. Ph.D., Prof. — Dept. of Biol. Sci., State Univ. of New York at Albany, ALBANY, N.Y. 12203, U.S.A.
a Control mechanisms of sperm motility

RIMNICEANU, Mrs. C. Dr.med., Prof. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania
a Histochemistry of the placenta. *Homo sapiens (Primates)*

RINALDI, Miss A. M. Dr.Biol. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
a Messenger RNA in unfertilized eggs. *Arbacia punctulata (Echinoidea)*

RINALDI, Miss L. Dr.Biol. — Ist. di Zool., Univ. di Parma, Via Università 12, 43100 PARMA, Italy
a Experimental morphology of bone induction and inhibitory action of thalidomide. (in collaboration with B. SCHREIBER)
RINAUDO, M. T. Prof. — Inst. of Biochem., Univ. of Turin, Via Giolitti 34, 10123 TORINO, Italy
a Induction by prolactin of thyroid activation in larvae at advanced metamorphic stages. *Bufo bufo (Anura)* (in collaboration with R. BRUNO. Miss A. GUARDABASSI, M. OLIVERO, E. CAMPANTICO and C. GIUNTA)
RISLEY, P. L. Ph.D., Prof. — Dept. of Biol., Univ. of Oregon, EUGENE, Ore., U.S.A.
RITSCHARD, R. L. Ph.D. — Biol. Sci. Dept., Calif. State Polytechn. Coll., SAN LUIS OBISPO, Calif. 93401, U.S.A.
a Histochemical study of epithelio-mesenchymal relationships in skin development. *(Aves, Mammalia)*
b Autoradiography and histochemistry of developing placentae. *(Mammalia)*
RIVERA, Miss E. M. Ph.D., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.
a Analysis of hormone actions on mammary gland development in organ culture. *Mus musculus (Rodentia)*
RIZKI, T. M. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
a Mutant genes regulating the function and structure of fat cells in the functional differentiation of the fat body (fluorescence and electron microscopy). *Drosophila melanogaster (Diptera)*
b The effects of various nucleic acid analogs in relation to morphogenesis, especially those substances which can serve as mutagens. *Drosophila melanogaster (Diptera)*
RIZZOLI, C. M.D., Prof. — Inst. of Histol. and Gen. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italy
ROBERT, M. Dipl.Natw. — Inst. für Genet., Univ. des Saarlandes, 66 SAARBRÜCKEN 11, W.Germany
a Regulation of gene activity and histone cytochemistry in giant chromosomes. *Chironomus thummi, Ch. tentans (Diptera)*
ROBERT, Miss M.-F. — Lab. d'Embryol., Fac. de Méd., Univ. de Nancy, 31 rue Lionnois, 54 NANCY, France
ROBERTS, A. Ph.D. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England
a Electrophysiology of embryos and larvae. *(Amphibia)*
ROBERTS, L. W. Ph.D., Prof. — Dept. of Biol. Sci., Univ. of Idaho, MOSCOW, Idaho 83843, U.S.A.
a Experimental induction of wound vessel member differentiation. *Coleus blumei (Labiatae)* (in collaboration with S. BABA, Kyoto, Japan)
b Histochemical localization of enzymes during wound vessel member differentiation. *Coleus blumei (Labiatae)*
c Morphogenesis and histochemistry in tissue culture. *(Angiospermae)*
ROBERTSON, B. M.D. — Dept. of Pediat. Pathol., Karolinska Hosp., 10401 STOCKHOLM, Sweden
a The pathology and anatomy of pulmonary vasculature in congenital heart malformations, particularly transposition of the great arteries. *Homo sapiens (Primates)*
ROBERTSON (PATON), Mrs. E. M. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.
a Development of imaginal buds. *Drosophila* spec. *(Diptera)* (in collaboration with C. H. WADDINGTON)
ROBERTSON, G. G. Ph.D., Prof. — Dept. of Anat., Coll. of Basic Med. Sci., Med. Units, Univ. of Tennessee, 62 S.Dunlap St., MEMPHIS, Tenn. 38103, U.S.A. •
a Virus-induced abnormalities in embryos. *Gallus domesticus (Aves)*
ROBERTSON, H. A. Ph.D. — Anim. Research Inst., Dept. of Agric., Centr. Exper. Farm, OTTAWA, Ont., Canada
a Role of pituitary gonadotrophins in the development and ovulation of ovarian follicles in implantation. *Rattus norvegicus (Rodentia), Ovis aries (Artiodactyla)*
ROBERTSON, P. B. M.S. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, Virginia Key, MIAMI, Fla. 33149, U.S.A.
ROBINSON, J. C. M.D.,Ph.D. — Lab. of Biomed. Sci., Natl. Inst. of Child Health and Human Developm., Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A.
a Characterization of pregnancy-associated enzymes in maternal blood plasma. *Homo sapiens (Primates)*
ROBISON, O. W. Ph.D., Prof. — Dept. of Anim. Sci., North Carolina State Univ., P.O. Box 5127, RALEIGH, N.C. 27607, U.S.A.
a Genetic and maternal effects on development of the neonate; cross-fostering, automatic sow and standard statistical analysis. *Sus scrofa (Artiodactyla)*
b Study of early embryonic development by embryo transfer; factors contributing to uterine capacity. *Sus scrofa (Artiodactyla)*

ROCKSTEIN, M. Ph.D., Prof. — Dept. of Physiol., Univ. of Miami, P.O. Box 875, Biscayne Annex, MIAMI, Fla. 33152, U.S.A.
a Physiological basis of aging, growth and metamorphosis. *Musca domestica (Diptera)*
b Metachemogenesis — post emergence biochemical maturation. *(Holometabola, Insecta)*
c Hereditary vs. environmental factors in longevity. *(Diptera, Hymenoptera)*
d Effects of X-irradiation on development, aging and longevity. *Musca domestica (Diptera)*

RODRIGUES CORREIA, Mrs. M. J. M.D. — Inst. de Histol. e Embriol., Fac. de Med., Av. Prof. Egas Moniz, LISBOA 4, Portugal
a Ultrastructure of the embryonic mesonephros. *Gallus domesticus (Aves)*
b Ultrastructural cytogenesis of the embryonic myocardium. *Gallus domesticus (Aves)*
c Action of ionizing radiations upon the embryonated egg. *Gallus domesticus (Aves)* (in collaboration with M. J. XAVIER MORATO)

ROEDER, R. G. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Biochemical studies of early development. *Xenopus laevis (Anura)* (in collaboration with D. D. BROWN)

ROELS, F. M.D. — Lab. of Anat., Univ. of Gent, Ledeganckstr. 35, GENT, Belgium

ROGERS, K. T. Ph.D. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.
a Development of the $Na^+ + K^+$-activated ATPase system in the retina and the ciliary body. *Gallus domesticus (Aves), Oryctolagus cuniculus (Lagomorpha)*

ROGUEDA (VIGNAU), Mrs. J. Dr.Biol.anim. — Lab. de Zool. Expérim., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France
a Recherches expérimentales sur la morphogenèse embryonnaire de la tête. *Carausius* spec. *(Orthoptera)*

ROGULSKA, Miss T. Ph. D. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a Origin and fate of primordial germ cells. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Regulative capacities of blastoderm. *Gallus domesticus, Anas platyrhynchos domestica (Aves)*

ROKYTA, R. MUDr. — Inst. Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia
a Development of different parts of medial geniculate body (GM), and its projection to the homolateral and contralateral cortex. *Felis domestica (Carnivora), Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
b Interhemispherical connections between subcortical auditory centres, especially between medial geniculate bodies in development. *Felis domestica (Carnivora), Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

ROLLHÄUSER, H. Dr.med., Prof. — Anat. Inst. der Univ. Münster, Vesaliusweg 2-4, 44 MÜNSTER/Wesf., W.Germany
a Pre- and postnatal development of phenol red excreting capacity of the proximal renal tubules in relation to ultrastructural tubule cell differentiation (vital staining, freeze-drying method, electron microscopy). *Mus rattus (Rodentia)*

ROLLHÄUSER (TER HORST), Mrs. J. O. B. Dr.rer.nat. — Anat. Inst., Univ. Münster, Vesaliusweg 2-4, 44 MÜNSTER/Westf., W.Germany
(no embryological work in progress)

ROLLINS, E. A. Ph.D. — Dept. of Biol., State Univ. of New York at Albany, ALBANY, N.Y. 12203, U.S.A.
a Control of tissue-specific RNA and protein synthesis in the early embryo. *Rana pipiens (Anura)*
b Characterization of chromatin, DNA, RNA and protein at specific developmental stages. employing cell or organ culture and nuclear isolation. *Rana pipiens (Anura)*

ROMANOFF, A. L. Ph.D., Prof. (Emer.) — Lab. of Chem. Embryol., Cornell Univ., c/o 105 Rice Hall, ITHACA, N.Y. 14850, U.S.A.
a Chemical embryology. *(Aves)*
b Developmental pathology. *(Aves)*

ROMANOVA, Mrs. L. K. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

ROMANOVSKÝ, A. RNDr., C.Sc., Prof. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia
a Proteins and antigens in early development. *(Amphibia)* (in collaboration with J. MÁCHA, J. PALEČEK and A. MACELA)
b Transplantation of nuclei in relation to the development of antigenic characteristics. *(Amphibia)* (in collaboration with F. SLADEČEK)

ROMIJN, C. Dr., Prof. — Lab. of Veter. Physiol., State Univ. of Utrecht, Alex. Numankade 93, UTRECHT, Netherlands
a Physiology of respiration in embryos under influence of environmental conditions. *Gallus domesticus (Aves)* (in collaboration with Miss W. LOKHORST)

ROOS, T. B. Ph.D., Prof. — Dept. of Biol. Sci., Dartmouth College, HANOVER, N.H. 03755, U.S.A.

a Biochemical and morphological differentiation of the adrenal cortex from the anlage to the functional state (12 to 16 days, stages 19-33) (electron microscopy, histochemistry and organ culture). *Rattus norvegicus (Rodentia)*

b Development of pituitary control of endrocrine function; organ culture studies of independent differentiation of mesonephric ridge components in order to determine their interactions and competence and their response to pituitary and neural control. *Rattus norvegicus (Rodentia)*

ROOSEN (RUNGE), E. C. M.D., Prof. — Dept. of Biol. Struct., School of Med., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

ROSA, C. F. A. — Dept. de Biol., Fac. Filos. Ciênc. e Let. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 759, RIBEIRÃO PRÊTO, S.P., Brazil

a Analysis of regional distribution of differentiation tendencies in the presumptive prosencephalon. *Triturus alpestris (Urodela)*

ROSATE, A. — Ist. di Anat. Umana Norm. della Univ., Corso M.D'Azeglio 52, 10126 TORINO, Italy

ROSE, S. M. Ph.D., Prof. — Lab. of Developm. Biol., Dept. of Anat., Tulane Univ., F. Edward Hebert Center, BELLE CHASSE, La. 70037, U.S.A.

RÖSELER, P.-F. Dr. — Städt. Museum für Naturk., Gerberau 32, 78 FREIBURG i.Br., W.Germany

ROSENBAUM, J. L. Ph.D. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a Relation between flagellar protein precursor pools and regeneration kinetics studied in amino acid-requiring and paralyzed flagella mutants by use of inhibitors of protein synthesis (cycloheximide), assembly (colchicine, vinblastine), pulse-labeling; isolation, characterization, and in vitro polymerization of flagellar microtubule subunits; growth zones of microtubules, in vivo and in vitro by autoradiography. *(Chlamydomonas reinhardi (Volvocales, Chlorophyta), Tetrahymena pyriformis (Ciliata)*

ROSENBERG, A. J. Prof. — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai Saint Bernard, 75 PARIS 5e, France

a Developmental biochemistry

ROSENBERG, Miss M. R. M.D., Ph.D. — Dept. of Genet., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Rd. & Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

a Molecular basis for the fetal-to-adult hemoglobin synthesis switch. *Mus musculus (Rodentia)*

b Genetic control of sperm differentiation. *Mus musculus (Rodentia)*

ROSI, Miss G. Dott.Sci.Biol. — Ist. di Biol. Gener., Fac. di Med., Via del Giochetto, 06100 PERUGIA, Italia

a Rapporti tra rigenerazione e neurosecrezione. *Dugesia lugubris (Turbellaria), Allolobophora caliginosa (Oligochaeta)*

b Influenza di alcune sostanze simpaticomimetiche sulla rigenerazione. *Dugesia lugubris (Turbellaria), Allolobophora caliginosa (Oligochaeta)*

ROSS, G. T. B.A. — Dept. of Zool., Coll. of Sci., Univ. of Western Ontario, LONDON, Ont., Canada

a Effect of actinomycin D on developmental processes. *(Teleostei)*

ROSS, K. F. A. D.Phil. — Muscular Dystrophy Res. Labs., Newcastle Gen. Hosp., NEWCASTLE upon Tyne NE4 6BE, England

a The quantitative measurement of RNA in normally differentiating myoblasts growing in tissue culture, and in comparable myoblasts cultured from dystrophic muscle. *Gallus domesticus (Aves), Mus musculus (Rodentia), Homo sapiens (Primates)* (in collaboration with D. E. JANS)

b Measurement of the uptake by myoblasts of RNA fractions added to tissue culture media. *Gallus domesticus (Aves), Mus musculus (Rodentia), Homo sapiens (Primates)* (in collaboration with D. E. JANS)

ROSS, L. M. M.D., Ph.D. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex. 77550, U.S.A.

a Production of abnormalities of the thymus using teratogens (vitamin A, cortisone). *(Mammalia)*

b The role of the embryonic tongue in the process of closure of the secondary palate. *(Mammalia)*

ROSSI, A. Dr. — Ist. di Anat. Comp. "Battista Grassi", Fac. di Sci., Univ. di Roma, Via A. Borelli 50, 00161 ROMA, Italy

a Determination in the neural plate. *Rana esculenta, Bufo bufo (Anura)*

ROSSINI, Miss M. C. Dr.nat.sci. — Ist. di Anat. Comp., Univ. di Bologna, Via Belmeloro 8, BOLOGNA (103), Italy

ROSTAND, J. Prof. — 29 rue Pradier, 92 VILLE D'AVRAY, France

a Parthenogenèse et gynogenèse; régulation chromosomique par le froid. *(Amphibia)*

b Mutations (polydactylie, ectrodactylie, etc.) et anomalies provoquées par le milieu extérieur (principalement "Anomalie P"). *(Amphibia)*
c Action protectrice de la glycérine à l'égard de la congélation des cellules spermatiques. *(Amphibia)*

ROSTEDT, Miss I. B. M.Sc. — Lab. of Exper. Embryol., Dept. of Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI 10, Finland
a Heterogeneous inductors on embryonic ectoderm. *Gallus domesticus (Aves)*
b Early embryonic development. *Gallus domesticus (Aves)*

ROTH, T. F. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Cytochemistry of meiotic development

ROTT, Mrs. N. N. Cand.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Changes of mitotic cycle in early embryogenesis as related to morphogenetic nuclear function and synthesis of RNA. *Strongylocentrotus nudus (Echinoidea), Misgurnus fossilis, Salmo gairdneri, Cyprinus carpio, Esox lucius (Teleostei), Ambystoma mexicanum (Urodela)*

ROUCH, R. — Lab. Souterrain du C.N.R.S., 09 MOULIS (Ariège), France

ROULSTON, W. J. M.Sc. — Long Pocket Labs., C.S.I.R.O. Div. of Entomol., Meiers Rd., INDOOROOPILLY 4068, Brisbane, Australia
(no embryological work in progress)

ROUSSEL, C. Dr.en Méd. — Lab. d'Histol.-Embryol. A, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France
a Mode d'action de certaines substances tératogènes (Triton WR 1339). *(Mammalia)*

ROUX, Ch. Dr.en Méd., Prof. — Lab. d'Embryol., CHU Saint-Antoine, 27, rue Chaligny, 75 PARIS 12e, France
a Teratogenic action of inhibitors of cholesterol synthesis. *Mus musculus, Rattus norvegicus (Rodentia), (Primates)*
b Morphogenesis of cardiac malformations. *Mus musculus, Rattus norvegicus (Rodentia)*
c Virus and gestation. *Rattus norvegicus (Rodentia)*
d Chromosome aberrations and teratogenic action of different drugs such as thalidomide and cytostatics. *Rattus norvegicus, Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

ROUX, J. P. Lic.de Sci.Nat. — Lab. de Zool, Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Histochemical and ultrastructural study on teeth buds. *Pleurodeles waltlii (Urodela)*

ROWINSKI, P. Prof. — Ist. di Fisiol. gen. e spec. degli Anim. domest. e Chim. Biol., Univ. di Torino, TORINO, Italy

ROWLEY, D. A. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Cell interactions and homeostasis in immune response

ROWSON, L. E. A. M.R.C.V.S. — A.R.C. Unit of Reprod. Physiol. and Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England
a Ovum transplantation and artificial insemination. *(Mammalia)*

RUBEN, L. N. Ph.D., Prof. — Biol. Dept., The Reed Inst., PORTLAND, Ore. 97202, U.S.A.
a Amphibian neoplasia (physical and chemical factors affecting immunocompetence and its relation to lymphosarcoma transmissibility and development). *Triturus viridescens, Xenopus laevis, Rana pipiens (Amphibia)*

RUBEN, R. J. M.D. — Dept. of Otolaryngol., School of Med., New York Univ., 550 First Ave., Room H-314, NEW YORK, N.Y. 10016, U.S.A.

RUCH, J. V. Dr.méd., Dr.ès Sci. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
a Chimiotératogenèse (venins). *(Aves)*
b Action d'un corticoide (phosphate de dexaméthasone) in vivo et in vitro. *(Aves); Mammalia)*

RUDDLE, F. H. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Discrimination between genetic and epigenetic events in somatic cells in vitro by studying enzyme variants. *Mus musculus (Rodentia)*

RÜDEBERG, S. I. Ph.D. — Tornblad-Inst. for Comp. Embryol., Biskopsgatan 7, LUND, Sweden
a Histochemistry of cerebellum during development. *(Vertebrata)*

RUDNEVA, T. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Time regularities of the maturation process; temperature effect upon maturation processes in vivo and in vitro. *(Amphibia)* (in collaboration with Mrs. T. A. DETTLAFF)

RUDNICK, Miss D. Ph.D., — address unknown

RUGH, R. Ph.D., Prof. — Radiobiol. Res. Lab, Dept. of Radiol., Coll. of Physicians & Surgeons, Columbia Univ., 630 West 168th St., NEW YORK, N.Y. 10032, U.S.A.
a Heterosis and X-irradiation tolerance. *Mus musculus (Rodentia)*
b Sensitivity to irradiation of the fetal testes at different stages of development. *Mus musculus (Rodentia)*
c Reparation of the fetal eye following irradiation insult. *Mus musculus (Rodentia)*
d Behavior following low-level fetal X-irradiation. *Rattus norvegicus (Rodentia)*
e Neuropathological effects of ionizing radiations on the fetus. *(Mammalia)*
f Behavioral effects of the fetus X-rayed in utero. *(Mammalia)*
g Heterosis and the development of irradiation congenital anomalies. *(Mammalia)*
h Electroencephalographic analysis of brain following fetal irradiation. *(Mammalia)*

RUMPLER, Y. Dr.en Méd. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
a Action d'un antithyroidien in vivo et in vitro. *(Aves; Mammalia)*

RUNNER, M. N. Ph.D., Prof. — Inst. for Developm. Biol., Univ. of Colorado, BOULDER, Colo. 80302, U.S.A. •

RUNNSTRÖM, J. A. M. M.D., Ph.D., Prof. (Emer.) — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden •
a The activation impulse in fertilization and artificial parthenogenesis. *(Echinoidea)*
b Fine cell structure. *(Echinoidea)*
c The bilateral organization of the egg. *(Echinoidea)*
d The role of the animal-vegetal balance in development; the character and mode of action of vegetal agents. *(Echinoidea)*
e Extraction and fractionation of animalizing and vegetalizing substances. *Paracentrotus lividus (Echinoidea)* (in collaboration with S. HÖRSTADIUS, Uppsala)

RUSAOUËN, Mrs. M. Dr. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

RUSCH, H. P. M.D., Prof. — McArdle Lab. for Cancer Research, Univ. of Wisconsin, 450 N. Randall Ave., MADISON, Wis. 53706, U.S.A.
a Biochemical events associated with growth and differentiation (sporulation). *Physarum polycephalum (Myxomycetae)*

RUSSO-CAIA, S. Prof.Inc. — Ist. di Istol. ed Embriol., Fac. di Sci., Univ. di Roma, Citta Universitaria, 00185 ROMA, Italy
a Biochemical and cytochemical studies on the regression of the mesonephros. *Gallus gallus (Aves)*
b Cytochemical and autoradiographic investigation on oogenesis. *Mytilus edulis (Mollusca), Musca domestica (Diptera), Dytiscus marginalis (Coleoptera)*
c Biochemistry and histochemistry of metamorphosis. *Mus domestica (Diptera)*

RUTH, R. F. Ph.D., Prof. — Dept. of Zool., Fac. of Sci., Univ. of Alberta, EDMONTON, Alta., Canada
a Immunogenetic analysis of graft rejection and graft-versus-host reactions in the very young animal. *Gallus gallus (Aves)*
b The origins of the immunoglobulins. *Gallus gallus (Aves)*
c Origin of the immunologically competent cell. *Gallus gallus (Aves)*
d Immunofluorescent localization of transplantation antigens in the developing animal. *Gallus gallus (Aves)*
e The histologic and metabolic maturation of the primordia of the lymphoid system. *Gallus gallus (Aves)*

RYABININA, Miss Z. A. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

RYCHTER, Z. MUDr. — Dept. of Histol., Charles Univ., U.nemocnice 3, PRAHA 2, Czechoslovakia

RYCZKOWSKI, M. Dr. — Dept. of Plant Physiol., Jagellonian Univ., Grodzka 53, KRAKÓW, Poland
a Physico-chemical and physiological properties of the developing ovule and embryo. *(Monocotyledonae, Dicotyledonae, Angiospermae; Gymnospermae)*
1. Osmotic gradients in the developing ovule and embryo (thermoelectric method)
2. Changes in the osmotic value of the sap surrounding the developing embryo (thermoelectric method)
3. Physiological activity of the sap surrounding the developing embryo (Avena test)
4. pH of the developing embryo and the surrounding sap (RIM method)

RYLAND, J. S. Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales, U.K.

RZEHAK, K. Ph.D. — Dept. of Biol. and Embryol., Acad. of Med., ul. Kopernika 7, KRAKÓW, Poland

SAAG, P. Th. M. van der M.Sc. — Hubrecht Lab. (Intern. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a Patterns of nucleic acid and protein synthesis associated with neural and endo-mesodermal competence in the blastula/gastrula stage. *Ambystoma mexicanum (Urodela)* (in collaboration with P. D. NIEUWKOOP and Miss G. A. UBBELS)

SABBADIN, A. Dr., Prof. — Ist. di Biol. Anim., Fac. di Sci., Via Loredan 10, 35100 PADOVA, Italy
a Differentiation of pigment cells. *Botryllus schlosseri (Ascidae)*
b Differentiation of germ cells. *Botryllus schlosseri (Ascidiae)*
SACARRÃO, G. da FONSECA Dr.Sc., Prof. — Fac. de Ciencias, Museu Bocage, LISBOA. Portugal
a Development of the epistellar body. *Octopus* spec., *Argonauta* spec. *(Cephalopoda)*
b Development of the statocyst. *(Cephalopoda)*
c Blastokinesis. *Tremoctopus violaceus (Cephalopoda)*
SACK, W. O. D.V.M., Ph.D., Prof. — Dept. of Anat., Vet. Coll., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.
a Establishing a comprehensive embryological slide collection of domestic and laboratory animals. *Canis familiaris, Felis catus, Bos taurus, Ovis aries, Rattus rattus, Mus musculus, Cavia cobaya (Mammalia)* (in collaboration with H. E. EVANS)
b Developmental morphology. *Canis familiaris (Carnivora), Bos taurus (Artiodactyla)*
SADOKOVA, Miss I. E. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Regeneration of myocardium (biochemical study). *Oryctolagus cuniculus (Lagomorpha)*
SAGAWA, Y. Ph.D., Prof. — Harold L. Lyon Arboretum and Horticult. Dept., Univ. of Hawaii, HONOLULU, Hawaii 96822, U.S.A.
a Developmental studies of ovule formation. *(Orchidaceae)*
b Developmental studies of apical meristem explants. *(Orchidaceae)*
c Studies of in vivo growth of pollen tubes. *(Orchidaceae)*
SAKAI, H. Ph.D., Prof. — Dept. of Biophys. and Biochem., Fac. of Sci., Univ. of Tokyo, 7-3-1 Hongo, Bunkyo-ku, TOKYO 113, Japan
a Cell division and cortical contractile protein. *Pseudocentrotus depressus, Hemicentrotus pulcherrimus (Echinoidea)*
b Mitotic apparatus and a protein which catalyzes transhydrogen between the cell cortex and the mitotic apparatus. *Pseudocentrotus depressus, Hemicentrotus pulcherrimus (Echinoidea)*
SAKUN, Mrs. O. F. Cand.biol.sci. — Biol. Inst., Leningrad State Univ., LENINGRAD B-164, U.S.S.R.
a Studies of the effects of pituitary gonadotropins on the various phases of oogenesis, with special reference to the correlations between meiosis and vitellogenesis. *Salmo salar, Oncorhynchus gorbuscha, Coregonus lavaretus pidschian (Clupeiformes), Acerina cernua (Perciformes, Teleostei)*
SALA, M. Dr., Prof. — Dept. of Biol., Fordham Univ., NEW YORK, Bronx, N.Y. 10458, U.S.A.
SALAMATINA, Miss N. V. — Dept. of Biophysics, Inst. of Exper. Morphol., Acad. of Sci. of the Georgian S.S.R., 51 St. Kamo, TBILISSI 2, U.S.S.R.
a Role of chemical intercellular interactions in regulation of the rate of cell multiplication and intercellular syntheses studied in cell cultures. *(Vertebrata)*
SALAÜN, Miss J. Dr.ès Sci. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94 NOGENT-sur-MARNE, France
a Formation expérimentale d'embryomes homoplastiques et hétéroplastiques. *Gallus gallus (Aves), Rattus rattus (Rodentia)*
b Influence réciproque des cellules cancéreuses et embryonnaires réunies sur un même hôte. *Rattus rattus, Mus musculus (Rodentia)*
SALLACH, H. J. Ph.D., Prof. — Dept. of Physiol. Chem., Univ. of Wisconsin, 1215 Linden Drive, MADISON, Wis. 53706, U.S.A.
a Biochemical aspects of development and differentiation (enzyme changes; metabolism of carbohydrates and nucleic acids). *Rana pipiens, R. catesbeiana (Anura)*
SALLES, J. M. de B.Sc. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4° andar, C.P. 253, BELO HORIZONTE, M.G., Brazil
a Electron microscope study of the germinal vesicle, with special reference to the "juxta-nucleolar granules". *Bufo paracnemis (Anura)*
SALOMÓN de LEGNAME, Mrs. H. Dr.Biochem. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina
a Intermediate metabolism during early development. *Bufo arenarum (Anura)*
b Mitochondria during embryogenesis. *Bufo arenarum (Anura)*
SALTHE, S. N. Ph.D. — Dept. of Biol., Brooklyn Coll., Bedford Ave. and Ave. H, NEW YORK, Brooklyn, N.Y. 11210, U.S.A.
a Mechanism of expansion of perivitelline fluid in the egg. *Rana pipiens (Anura)*
b Study of the hatching enzymes. *(Amphibia)*
c Development of lactic dehydrogenase isoenzymes. *Rana pipiens, R. palustris (Anura)*
SALVATORELLI, G. Ph.D. — Ist. di Anat. Comp., Univ. di Ferrara, Via Scienze 17, 44100 FERRARA, Italia
a Factors in foetal erythropoiesis. *Gallus domesticus (Aves)*
b Erythropoiesis and leucopoiesis during metamorphosis. *Bufo bufo (Anura)*

SALZGEBER, Miss B. Dr.ès. Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France •
a Recherches sur l'action d'agents physiques et chimiques sur la différenciation sexuelle.
b Action de substances chimiques sur les gonades embryonnaires cultivées in vitro.
c Etude sur les associations de gonades embryonnaires de deux classes. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*
d Etude des effects tératogènes (malformations de membres) obtenus 1) par l'ypérite azotée (chlorethylamine), 2) par la thalidomide (phtalimidoglutarimide). *Gallus* spec. *(Aves)*
e Recherches sur la genèse des malformations de membres. *Gallus domesticus (Aves)*

SAMANO BISHOP, Miss A. Dr. — Inst. de Biol., Univ. Nac. Autonoma de México, MÉXICO 20, D.F., México

SAMUELLI, Miss C. Dr. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italy

SANANÉS, Miss N. Lic.ès Sci. — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôp. Saint-Antoine, 184, rue du Faubourg Saint-Antoine, PARIS 12e, France
a Ultrastructure de la réaction déciduale *(Mammalia)*

SANCHEZ (TEFF), Mrs. S. Dr.ès Sci. — Lab. d'Histol., Fac. de Méd., 2 rue Ecole de Médecine, 34 MONTPELLIER, France
a Oogenesis: synthesis of RNA and basic proteins (autoradiography with ^{3}H orotic acid and ^{3}H lysine; electron microscopy). *Paracentrotus lividus (Echinoidea)*

SANDAHL, B. M.D. — Tornblad Inst. for Comp. Embryol., Biskopsgatan 7, LUND, Sweden
a Cytogenetics in spontaneously aborted embryos. *Homo sapiens (Primates)*

SANDER, K. Ph.D., Prof. — Biol. Inst. I (Zool.) der Univ., Katharinenstr. 20, 78 FREIBURG, W.Germany •
a Early stages of embryogenesis: epigenetics of segmentation pattern, blastokinesis. *Euscelis plebejus (Cicadina, Homoptera), (Chironomidae, Diptera)*
b Developmental physiology of embryonic mycetomes. *Euscelis plebejus* and other spp *(Cicadina, Homoptera)*

SANDOR, S. Dr.med. — Centrul de Embriol. Norm. şi Patol., Acad. Republ. Social. România, Bul.M.Viteazul 24, TIMIŞOARA, Rumania
a Teratological tests in early developmental stages. *Gallus domesticus (Aves)*
b Embryonic pathology. *Gallus domesticus (Aves)*
c Development of embryonic axial organs. *Gallus domesticus (Aves)*
d Time-lapse cinematography of early embryonic development. *Gallus domesticus (Aves)*

SANG, J. H. Ph.D., Prof. — School of Biol. Sci., Univ. of Sussex, Falmer, BRIGHTON, Sussex, England
a Analysis of developmental effects of melanotic tumor genes, using germ-free techniques. *Drosophila melanogaster (Diptera)*
b Culture of embryonic cells. *Drosophila melanogaster (Diptera)*

SANN, A. B.Sc. — Dept. of Embryol., Marischal Coll., Univ. of Aberdeen, ABERDEEN AB9 1AS, Scotland, U.K.
a Morphological studies of chick embryo fibroblasts, in monolayer culture, affected by the addition of Kirby-prepared rat liver RNA extracts, nucleotides, enzymes etc. *Gallus domesticus (Aves), Rattus rattus (Rodentia)*
b Autoradiographic studies of H^3-uridine and H^3-RNA incorporation into embryonic fibroblasts. *Gallus domesticus (Aves)*

SANTAMARIA, P. M.Sc. — Sect. Developm. Genet., Inst. of Genet. and Anthropol., Velazquez 144, MADRID 6, Spain
a Analysis of wing development in scalloping mutants by means of somatic recombination: allele homozygosity at different times of development, and clonal analysis of the mutant wing. *Drosophila melanogaster (Diptera)*

SANT'ANA, Miss Y. X. B.Sc. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4° andar, C.P. 253, BELO HORIZONTE, M.G., Brazil
a Cyto-embryology (DNA and nuclear size in development). *Tilapia melanopleura (Teleostei)*

SANTORO D'ANGELO, Mrs. L. Dr. — Ist. di Biol. Gen., Univ. di Roma, Policlinico Umberto I, 00100 ROMA, Italy

SASAKI, M. D.Sc. — Anim. Chromosomes Research Unit, Fac. of Sci., Hokkaido Univ., North 10, West 8, SAPPORO, 060 Japan
a Chromosome studies in early embryogenesis, with special reference to spontaneous abortion, maldevelopment and sex ratio. *Homo sapiens (Primates)*

SASAKI, N. D.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812, Japan
a Change of regional effect in primary induction with special reference to molecular structure of inducing agent. *Triturus pyrrhogaster (Urodela), Gallus domesticus (Aves)*
b Transformation of primarily activated ectoderm by RNA. *Triturus pyrrhogaster (Urodela)*

SATHANANTHAN, A. H. Ph.D. — Dept. of Zool., Univ. of Ceylon, COLOMBO 3, Ceylon
a Morphological, cytochemical and ultra-structural aspects of early development from second maturation division (oviposition) to the post-gastrula stage. *Arion ater rufus (Pulmonata, Gastropoda)*
b Cell movements in morphogenesis. *Arion ater rufus (Pulmonata, Gastropoda)*
SATO, G. H. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.
a Induction and maintenance of differentiated cell functions in vitro
SATO, H. D.Sc., Prof. — Dept. of Biol., Univ. of Pennsylvania, 217 Leidy Lab., PHILADELPHIA, Pa. 19104, U.S.A.
a Thermodynamics of molecular association in the isolated spindle, studied on meiosis-I metaphase in the oocyte (kinetic analysis, birefringence measurements). *Pisaster ochraceus (Asteroidea)*
b Crystallization of the spindle protein in the living mature oocyte. *Pectinaria gouldi (Polychaeta), Asterias forbesi, Pisaster ochraceus (Asteroidea)*
SATO, T. D.Sc., D.phil.nat., Prof. (Emer.) — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan •
SAUNDERS, D. S. Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Rd., EDINBURGH 9, Scotland. U.K.
SAUNDERS, J. W., Jr. Ph.D., Prof. — Dept. of Biol. Sci., State Univ. of New York at Albany, ALBANY, N.Y. 12203, U.S.A. •
a The role of ectoderm in the development of the limbs. *Gallus domesticus (Aves)*
b An analysis of the factors affecting tract-specificity in embryonic feather areas. *Gallus domesticus (Aves)*
c Ectoderm-mesoderm interactions in formation of the limbs. *Gallus domesticus (Aves)*
d Cellular deaths in morphogenesis. *Gallus domesticus (Aves), Campanularia flexuosa (Coelenterata)*
SAUSSEY, M. Dr.ès Sci. — Biol. et Ecol., Univ. de Caen, 14 CAEN, France
a Regeneration, sexuality and diapause. *Allolobophora icterica, A.* spp. *(Oligochaeta)*
SAUZIN, Miss M. J. — Lab. de Biol. Anim., Univ. de Paris, Fac. des Sci d'Orsay, 91 ORSAY, France
a Etude ultrastructurale du blastème de régénération: la différenciation des néoblastes. *(Planariidae, Turbellaria)*
SAWADA, N. D.Sc., Prof. — Biol. Inst., Ehime Univ., Bunkyo-cho, MATSUYAMA, 790, Japan
a Ultrastructural changes in oogenesis. *(Echiuroidea; Sipunculoidea; Lamellibranchia)*
b Structural changes of cortical layers in marine eggs. *(Echiuroidea; Polychaeta; Lamellibranchia)*
SAWAI, T. B.A. — Embryol. Sect., Biol. Dept., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158), Japan
a Studies of cleavage. *Triturus pyrrhogaster (Urodela)*
SAWIN, P. B. Sc.D. — The Jackson Lab., BAR HARBOR, Me. 04609, U.S.A.
a Normal and abnormal variations in growth of the skeleton in inbred races and in stocks carrying the dwarf genes Dw, Da and ac. *Oryctolagus cuniculus (Lagomorpha)*
SAXÉN, L. O. M.D., Phil.lic., Prof. — Lab. of Exper. Embryol., III Dept. of Pathol., Univ. of Helsinki, Haartmaninkatu 3, HELSINKI 25, Finland •
a Mechanism of primary induction. *Triturus* spec. *(Urodela)* (in collaboration with S. I. TOIVONEN, Dept. of Zool.)
b Mechanism of kidney tubulogenesis. *Mus musculus (Rodentia)* (in collaboration with J. J. WARTIOVAARA and others)
c Drug-induced teratogenesis in vitro. *Mus musculus (Rodentia)* (in collaboration with A. LAHTI and I. KAITILA)
d Virus-induced abnormalities in embryonic development. *Homo sapiens (Primates)* (in collaboration with O. J. KOSKIMIES, Dept. of Zool.)
SAXOD, R. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Experimental study of the differentiation of the cutaneous sensory corpuscles. *Gallus domesticus, Anas boschas (Aves)*
b Electron microscopical study of histogenesis and cholinesterases of Herbst's and Grandry's cutaneous sensory corpuscles. *Anas boschas (Aves)*
c Effects of X-rays on the innervation of the skin. *Gallus domesticus (Aves)*
SAZHINA, Miss M. V. Cand.biol.sci. — Phenogenet. Lab., Inst. of Gen. Genet., Acad. of Sci. of the U.S.S.R., Profsojuznay St. 7 (1), MOSCOW B-133, U.S.S.R.
a Developmental study of mutational effects of genes wich lead to eye abnormalities. *Mus musculus (Rodentia)*
SCALI, V. Dr.Nat.Sci. — Ist. di Zool. e Anat. Comp. dell'Univ., Via A. Volta 4, PISA, Italy
a Cytology and development. *(Cheleutoptera)*

SCARANO, E. — Lab. Internaz. di Genet. e Biofis., via G. Marconi 10, 80125 NAPOLI, Italy

SCHADÉ, J. P. M.D., Ph.D. — Netherl. Central Inst. for Brain Research, IJdijk 28, AMSTERDAM-O., Netherlands

a Development and maturation of structure and function of the central nervous system. *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha), Macaca mulatta (Primates)*
   1. Electrical patterns - EEG, evoked potentials.
   2. Spreading depression and convulsion mechanisms.
   3. Effect of X-irradiation and enzyme inhibitors.
   4. Structural organization of dendritic patterns.

SCHAIBLE, R. H. Ph.D. — Zool. Dept., Indiana Univ., BLOOMINGTON, Ind. 47401, U.S.A.

a Genetic control of differentiation and proliferation of pigment cell populations; embryonic and postnatal stages; tissue transplantation and genetic breeding tests. *Poecilia reticulata (Teleostei), Ambystoma mexicanum (Urodela), Gallus gallus (Aves), Mus musculus (Rodentia)*

SCHARLOO, W. Ph.D., Prof. — Genet. Inst., Univ. of Utrecht, Opaalweg 20, UTRECHT, Netherlands

a Effect of environmental factors and selection on the development of mutant characters. *Drosophila melanogaster (Diptera)*

b Induction of morphological aberrations by antimetabolites. *Drosophila melanogaster (Diptera)*

SCHEEPERS, G. J. B.Sc. — Dept. of Zool., Univ. of Pretoria, Hillcrest, PRETORIA, S.Africa

SCHEIB (PFLEGER), Mrs. D. Dr.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France

a Etude comparative sur l'apparition et la localisation des stéroides déshydrogénases chez l'embryon (histoenzymologie). Effet de substances inhibitrices. *Gallus domesticus, Coturnix japonica (Aves)*

b Etude de l'ultrastructure de la lignée interstitielle dans les gonades de l'embryon. *(Aves)*

SCHERRER, K. — Inst. Suisse de Rech. Expér. sur le Cancer, 21 rue Bugnon, LAUSANNE, Switzerland

SCHIEBLER, T. H. Dr.med., Prof. — Anat. Inst. der Univ., Koellikerstr. 6, 87 WÜRZBURG, W.Germany

a Experimental investigation of the kidney using actinomycin D in order to study the formation of enzymes during development. *Rattus norvegicus (Rodentia)*

b Chemo-differentiation of the optic system by enzyme-histochemical and experimental methods. *Rattus norvegicus (Rodentia)*

c Chemo-differentiation of the thalamus by enzyme-histochemical methods (histochemical and functional development of various thalamic nuclei). *Rattus norvegicus (Rodentia)*

SCHILT, J. Lic.ès Sc. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Catherine, 54 NANCY, France

a Tératologie: origine, évolution et transmission des lésions, excroissances et duplications. *Dugesia tigrina (Turbellaria)* (en collaboration avec F. STÉPHAN)

b Rôles respectifs du système nerveux et des territoires dans la régénération. *Dugesia lugubris (Turbellaria)*

SCHIMKE, R. T. M.D., Prof. — Dept. of Pharmacol., School of Med., Stanford Univ., STANFORD, Calif. 94305, U.S.A.

a Hormonal regulation of oviduct development and specific cell function. *Gallus domesticus (Aves)*

b Hormonal regulation of ovalbumin synthesis and ovalbumin messenger RNA content of oviduct tubular gland cells. *Gallus domesticus (Aves)*

SCHLESINGER, A. B. Ph.D., Prof. — Dept. of Biol., Creighton Univ., 2410 California St., OMAHA, Neb. 68131, U.S.A.

a Phase cinematographic time-lapse recording of morphogenetic movements of marginal tissue. *Gallus* spec. *(Aves)*

b Cytoplasmic nucleic acids involved in growth control of marginal tissue. *Gallus* spec. *(Aves)*

SCHLOOT, W. Dr.rer.nat. — Inst. für Humangenet. der Univ., Martinistr. 52, 2 HAMBURG 20, W.Germany
(no embryological work in progress)

SCHLÜTER, G. Dr.med. — Anat. Inst. der Univ., Abt. für Neuroanat., Nussallee 10, 53 BONN, W.Germany

a Embryology of the brain. *Mus musculus (Rodentia)*

b Teratogenesis in the nervous system. *Mus musculus (Rodentia)*

SCHMATOLLA, E. M.D. — Dept. of Biol., Grad. School of Arts and Sci., New York Univ., Washington Square, NEW YORK, N.Y. 10003, U.S.A.

a Development of the eye, optic nerve, and optic tectum in reciprocal transplants of eye rudiments between embryos of varieties with and without eyes. *Astyanax mexicanus* (syn. *Anoptichthyes jordani) (Teleostei)*

SCHMEKEL, Miss M. L. Dr.phil. — Arbeitsgr. Biochem. Embryol., Max-Planck-Inst. für Zellbiol., Abt. Bauer, Melanchthonstr. 36, D 7400 TÜBINGEN, W.Germany

a Fine structure of embryo. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*

SCHMERLING, J. G. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Effect of gonadotropins and changes in the germinal vesicle and in the oocyte cytoplasm during maturation. *(Acipenseridae, Chondrostei; Amphibia)* (in collaboration with Mrs. T. A. DETTLAFF)

b Cytoplasmic DNA of oocytes and somatic cells

SCHMIALEK, P. Dr.med., Dipl.Chem. — Inst. für Physiol. Chemie, Freie Univ. Berlin, Arnimallee 22, 1 BERLIN 33, W.Germany

a Hormonal effects in metamorphosis. *(Insecta)*

b Nucleo-cytoplasmic interrelations in somatic cells.

SCHMID, V. S. Dipl.Phil.II. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, 8006 ZÜRICH, Switzerland

a Differentiation potentialities of cells. *(Scyphozoa)*

SCHMID, W. Dr. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH, Switzerland

SCHMIDT, A. J. Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W.Polk St., CHICAGO, Ill. 60612, U.S.A.

a The hormonal influences on regenerating systems. *Triturus viridescens (Urodela)*

b The chemistry of regenerating systems. *Triturus viridescens (Urodela)*

c The fine structure of cells and tissues of regenerating systems. *Triturus viridescens (Urodela)*

d The histo- and cytochemistry or repairing cutaneous wounds. *Mus musculus (Rodentia)*

SCHMIDT, G. A. Dr.biol.sci., Prof. — Inst. of Evolut. Morphol. and Ecol. of Anim., Acad. of Sci. of the U.S.S.R., Lenin Ave. 33, MOSCOW V-71, U.S.S.R.

SCHMIDT, G. H. Dr.rer.nat. — Inst. für Angew. Zool., Univ. Würzburg, Röntgenring 10, 87 WÜRZBURG, W.Germany

a Postembryonic development of holometabolic forms. Esp. *Formica polyctena (Hymenoptera)*

SCHNEIDER, H. M.D. — Inst. Natl. de la Santé et de la Rech. Méd., Unité de Physiol. placentaire, Hôp. Saint-Antoine, 184, rue du Faubourg Saint-Antoine, PARIS 12e, France

a Perfusion of the placenta; double-perfusion technique; passage of vital dyes. *Homo (Primates)*

SCHNEIDERMAN, H. A. Ph.D. — Dept. of Organismic Biol., School of Biol. Scis., Univ. of California, IRVINE, Calif. 92664, U.S.A. •

SCHNETTER, W. Dr.rer.nat. — Zool. Inst. der Univ., Physiol. Lehrstuhl, Berlinerstr. 15, 6900 HEIDELBERG, W.Germany

a Early embryology. *Leptinotarsa decemlineata (Coleoptera)*

b Morphogenetic function of egg components; transplantation of nuclei and ooplasm. *Leptinotarsa decemlineata (Coleoptera)*

c Synthesis of RNA and protein during early embryogenesis. *(Insecta)*

SCHOELLER (RACCAUD), Mrs. J. Dr.ès Sci. — Lab. de Physiol. des Insectes, Fac. des Sci., 7 quai St. Bernard, PARIS 5e, France •

a Analyse expérimentale de la céphalogenèse larvaire et imaginale. *Calliphora* spec. *(Diptera)*

SCHOLL, G. Dr.rer.nat. — I. Zool. Inst., Naturw. Fak., Friedrich-Alexander Univ., Universitätsstr. 19, 852 ERLANGEN, W.Germany

a Development of the head and prothorax. *Carausius morosus (Phasmidoptera)*

b Development. *Limulus polyphemus (Xiphosura)*

SCHOONEVELD, H. M.Sc. — Lab. of Entomol., Agric. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands

SCHOONHOVEN, L. M. Dr. — Lab. of Entomol., Agric. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands

SCHOTTÉ, O. E. Ph.D., Prof. (Emer.) — Dept. of Biol., Amherst Coll., AMHERST, Mass. 01002, U.S.A. •

a Regression effect in tadpole limb regeneration (stages 4 to 12) following exposure to ionizing radiation. *Rana pipiens, R. clamitans, R. catesbeiana (Anura)*

b Control of regression effects in larval limb regeneration after irradiation of blastemata of varying age (5-20 days). *Triturus (Notophthalmus)* spec., *Salamandra maculosa (Urodela)*

c Influence of ionizing radiation upon morphogenesis in regeneration and in ontogenesis. *Salamandra maculosa, Siredon mexicanum, Triturus* spec. *(Urodela), Rana pipiens, R. catesbeiana (Anura)*

SCHOWING, J. Dr.ès Sci., Prof. — Inst. de Zool. et d'Anat. Comparée, Univ. de Fribourg, 1700 FRIBOURG, Switzerland

a Recherches des inducteurs céphaliques; leur action sur la morphogenèse du crâne. *Gallus gallus (Aves)*

b Etude expérimentale de la cyclopie, conséquences sur le développement cranien. *Gallus gallus (Aves)*

SCHRAMM, B. Dr.en Méd., Prof. — Lab. d'Histol.-Embryol. B, Fac. de Méd., 45 rue des Sts.Pères, PARIS VIe, France

a Placenta et annexes foetales. *Homo sapiens (Primates)*

b Malformations. *Homo sapiens (Primates)*

SCHREIBER, B. Prof. — Ist. di Zool., Univ. di Parma, Via Università 12, 43100 PARMA, Italy

a Experimental morphology of bone induction and inhibitory action of thalidomide. (in collaboration with Miss L. RINALDI)

SCHREIBER, G. Ph.D., Prof. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4°andar, C.P. 253, BELO HORIZONTE, M.G., Brazil

a Relations between DNA and nuclear size (non-histonic proteins) among specialized tissues of adult, embryonic tissues, and germinal line. *Biomphalaria (= Australorbis) glabrata (Pulmonata, Gastropoda), Aplysia brasiliana, Bulla striata (Ophisthobranchia, Gastropoda)*

b Study of nuclear size and DNA content (cytophotometry) of different organs in embryo and larva. *Ascidia nigra (Ascidiae)*

c Study of the DNA synthesis of endometrium, myometrium and placenta (autoradiography and cytophotometry). *Mus musculus (Rodentia)*

SCHROEDER, P. C. Ph.D. — Dept. of Zool., Washington State Univ., PULLMAN, Wash. 99163, U.S.A.

a Oogenesis and its hormonal control: 1. in vitro study of possible material transfer from coelomocytes to coelomic oocytes. 2. studies of nucleolus formation in eleocytes and autoradiography of uridine metabolism. 3. possible hormonal control of fertilizin synthesis during oogenesis. *Nereis grubei (Polychaeta)*

SCHRYVER, H. F. Ph.D., D.V.M., Prof. — Dept. of Large Anim. Med., New York State Vet. Coll., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

a Morphologic and biochemical aspects of skeletal development of the early embryo in organ culture. *(Mammalia)*

b Studies on chondrocyte hypertrophy including influences on hypertrophy and fate of hypertrophic cells. *(Mammalia)*

c Calcium metabolism in development. *(Mammalia)*

SCHUETZ, A. W. Ph.D. — Div. of Popul. Dynamics, School of Hyg. and Publ. Health, Johns Hopkins Univ., 615 N. Wolfe St., BALTIMORE, Md. 21205, U.S.A.

a Control and secretion of gonadotrophic hormones. *(Mammalia)*

b Gonadal steroidogenesis. *(Amphibia; Mammalia)*

c Testis differentiation and spermatogenesis. *(Mammalia)*

d Oocyte maturation. *(Asteroidea; Amphibia; Mammalia)*

SCHULMAN, H. M. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.

a Development of erythroid tissues.

SCHULTZ, Miss I. Dipl.biol. — Inst. für Zellphysiol., Deutsche Akad. der Wissensch. zu Berlin, Lindenberger Weg 70, 1115 BERLIN-Buch, East.Germany

SCHULTZ, R. L. Ph.D., Prof. — Dept. of Anat., Univ. of Colorado Med. School, 4200 E. 9th Ave., DENVER, Colo. 80220, U.S.A.

SCHUMACHER, G. H. Dr.med., Dr.med.dent., Prof. — Anat. Inst. der Univ., Gertrudenstr. 9, 25 ROSTOCK 1, East.Germany

a Allometrische Organuntersuchungen und Osteogenese. *Mesocricetus auratus (Rodentia)*

b Craniogenese und Osteogenese. *Larus ridibundus, Gallus domesticus (Aves)*

c Experimentelle Untersuchungen zur Frage von Organ- und Schädelveränderungen auf Grund statischer Veränderungen in der Postnatalperiode (Amputation der Vorderextremitäten). *Rattus norvegicus (Rodentia)*

SCHÜNZEL, G. Dr.rer.nat. — Biol. Inst., Med. Akad., Erich-Weinertstr. 3, 3014 MAGDEBURG, East.Germany

SCHWAIER, Miss A. Dr. — Städt. Museum für Naturk., Gerberau 32, 78 FREIBURG i.Br., W.Germany

SCHWANDER, J. — Lab. de Physiol. Génér., Fac. des Sci., 15 Place Carnot, 54 NANCY, France

(no embryological work in progress)

SCHWARTZ, R. J. B.S. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

a Embryonic development of neural retinal tissue in relation to protein products and nucleic acid synthesis. *Gallus domesticus (Aves)*

SCHWARTZ, V. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Hölderlinstr. 12, 74 TÜBINGEN, W.Germany

SCHWEIGER, H. G. Dr.med. — Max-Planck. Inst. für Zellbiol., Anton-Dohrn-Weg, Postfach 1009 D 294 WILHELMSHAVEN, W.Germany

a Biochemical aspects of nucleo-cytoplasmic interrelationships. (unicellular *Algae*)

b Autonomy of chloroplasts. *(Algae)*

c RNA-synthesis in anucleate cells. *(Algae)*
d Cooperation between different subcellular components in morphogenesis. *(Algae)*

SCHWEISTHAL, M. R. Ph.D., Prof. — Dept. of Oral Biol., School of Dent., Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.

SCOTHORNE, R. J. M.D., Prof. — Dept. of Anat., Med. School, The Univ., NEWCASTLE upon Tyne 1, England

SCOTT, T. K. Ph.D., Prof. — Dept. of Botany, Univ. of North Carolina, CHAPEL HILL, N.C. 27514, U.S.A.

a Auxin movement; the relation between transport and growth in seedlings as influenced by age and light. *Pisum sativum (Leguminosae), Zea mays (Gramineae)*
b Apical dominance; characterization of the hormonal control exhibited by shoot apices in lateral bud suppression. *Pisum sativum (Leguminosae), Coleus blumei (Labiatae)*

SCRIBA, M. E. L. Ph.D. — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, W.Germany

a Developmental abnormalities caused by lethal factors. *Drosophila melanogaster (Diptera)*

SEAGO, J. L. Ph.D. — Dept. of Biol., State Univ. Coll., OSWEGO, N.Y. 13126, U.S.A.

a Growth phenomena of the germinating seedling. *Ipomoea purpurea (Convolvulacea)*
b The initiation and establishment of the vascular connection between main and lateral roots. *Ipomoea purpurea (Convolvulaceae)*
c Developmental changes in the apical meristem. *Ipomoea purpurea (Convolvulaceae)*

SEALE, R. U. Ph.D. — Dept. of Anat., Univ. of Colorado Med. School, 4200 E. 9th Ave., DENVER, Colo. 80220, U.S.A.

SEARLS, R. L. Ph.D., Prof. — Dept. of Biol., Temple Univ., Broad and Berks St., PHILADELPHIA, Pa. 19122, U.S.A.

a Ectoderm-mesoderm interaction in limb development. *Gallus domesticus (Aves)*
b Metabolic changes in development. *Gallus domesticus (Aves)*
c Biochemistry of development. *Gallus domesticus (Aves)*

SEDLÁČEK, J. M.D., Ph.D. — Lab. of Embryophysiol., Inst. of Physiol., Fac. of Gen. Med., Charles Univ., Albertov 5, PRAGUE 2, Czechoslovakia

a Development of spontaneous and evoked phasic activity of CNS in prenatal period. *(Aves; Mammalia)*
b Development of low and high frequency impedance in fetal brain tissue. *(Aves; Mammalia)*
c Development of steady and membrane potential in fetal brain. *(Aves; Mammalia)*
d Development of extracellular environment of fetal brain (physical and chemical). *(Aves; Mammalia)*
e Development of membrane ATP-ase system in fetal brain tissue. *(Aves)*

SEDRA, S. N. Ph.D., Prof. — Dept. of Zool., Fac. of Sci., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt, U.A.R. •

a Behaviour of egg laying. *Rana fusca, Bufo regularis (Anura)*
b The chronological order of ossification. *Bufo regularis (Anura)*
c The development of the urogenital system. *Bufo regularis (Anura)* (in collaboration with M. I. MICHAEL and S. H. KHALIL)

SEECOF, R. L. Ph.D. — Dept. of Biol., City of Hope Med. Center, 1500 E. Duarte Rd., DUARTE, Calif. 91010, U.S.A.

a In vitro differentiation of embryonic cells; which embryonic stages give cells competent to do this?; identity of differentiating cells. *Drosophila melanogaster (Diptera)*

ŞEFTALIOĞLU, Miss A. — Inst. of Histol. and Embryol., Med. Fac., Hacettepe Sci. Center, ANKARA, Turkey

a Development and differentiation of mast cells after stimulation with 48/80 (histology and histochemistry). *Rattus norvegicus (Rodentia)*
b Ultrastructural development and differentiation of mast cells. *Rattus norvegicus (Rodentia)*

SEGAL, E. Ph.D., Prof. — San Fernando Valley State Coll., 18111 Nordhoff St., NORTHRIDGE, Calif. 91326, U.S.A.

SEGAL, S. J. Ph.D. — Biomed. Div., The Population Council, Rockefeller Univ., NEW YORK, N.Y. 10021, U.S.A. •

a Immunologic analysis of pituitary gonadotrophin function: development and species specificity. *(Vertebrata)*
b Mechanism of hormone action. *(Vertebrata)*
c Action of blastotoxic chemical agents. *(Vertebrata)*
d Oogenesis in the constant-estrus female. *Rattus norvegicus (Rodentia)*
e Studies on RNA in implantation. *Rattus norvegicus (Rodentia), (Primates)*

SEHNAL, F. C.Sc. — Dept. of Physiol., Inst. of Entomol., Czechoslov. Acad. of Sci., Na Folimance 5, PRAHA 2, Czechoslovakia

SEICHERT, V. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia

a Experimental analysis of limb formation. *Gallus domesticus (Aves)*

SEIDEL, F. Dr.phil., Prof. (Emer.) — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, W.Germany •

SEIGER, M. B. Ph.D., Prof. — Dept. of Biol., Div. of Sci. and Engin., Wright State Univ., Col. Glenn Highway, DAYTON, Ohio 45431, U.S.A.

a Use of immunogenetic techniques to study wing development. *Drosophila melanogaster (Diptera)*

SEITZ, K.-A. Dr.rer.nat. — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, W.Germany

a Oogenesis. *Cupiennius salei (Ctenidae, Araneida)*

SEKERIS, C. E. Ph.D. — Physiol.-Chem. Inst., Philipps-Univ., 355 MARBURG/Lahnberge, W.Germany

a Protein and RNA synthesis during metamorphosis; correlation with hormonal (ecdysone) secretion. *Calliphora erythrocephala (Diptera)*

b Mode of action of juvenile hormone. *Periplaneta americana (Dictyoptera), Calliphora erythrocephala (Diptera)*

SEKIGUCHI, K. Ph.D. — Inst. of Zool., Fac. of Sci., Tokyo Kyoiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan

a Transplantation experiments with the egg. *Tachypleus tridentatus (Xiphosura, Arachnida)*

SELLER, Miss M. J. Ph.D. — Paediat. Research Unit. Guy's Hosp. Med. School, LONDON S.E.1, England

a Haematology of congenital anaemia in the W-series mutants. *Mus musculus (Rodentia)*

b Experimental teratology. *(Mammalia)*

c Experimental production of chimaeras by 1. fusing eggs, 2. transplantation of tissue. *Mus musculus (Rodentia)*

d Chromosomes of trophoblast cells. *Mus musculus (Rodentia)*

SELMAN, G. G. Ph.D. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K. •

a Ultrastructural and experimental study of cleavage. *Triturus alpestris (Urodela), Xenopus laevis (Anura)* (in collaboration with Miss M. M. PERRY)

SEMBRAT, K. Ph.D., D.Sc., Prof. — Zaklad Zool. Ogólnej, Inst. of Zool., Univ. of Wrocław, ul. Sienkiewicza 21, WROCŁAW, Poland •

a Cytological and cytochemical studies in embryological development. *Embletonia pallida (= Eubranchus pallidus) (Opisthobranchia, Gastropoda)*

SENGEL, Ph. Dr.ès Sci., Prof. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38-GRENOBLE, France •

a Skin and feather development; production of supernumerary pterylae; mechanisms of feather pattern development. *Gallus domesticus (Aves)*

b Ultrastructural study on the development of the skin. *Pleurodeles waltlii (Urodela), Gallus domesticus (Aves)*

SENSENIG, E. C. Ph.D., Prof. — Dept. of Anat., Univ. of Alabama Med. Center, 1919 Seventh Ave. South, BIRMINGHAM, Ala. 35233, U.S.A. •

SENTEIN, P. Dr.en Méd., Dr.ès Sc., Prof. — Lab. d'Histol., Fac. de Méd., Univ. de Montpellier, 34 MONTPELLIER, France

a Association of antimitotic substances acting upon the cleaving egg (radiomimetic, anti-chromosome and depolarizing substances). *Triturus helveticus, Pleurodeles waltlii (Urodela)*

b Action of carboxylic acids on cleavage and on cell division in larval epithelium. *Triturus helveticus, Pleurodeles waltlii (Urodela)*

c Electron microscopy of cleaving egg. *Triturus helveticus, Pleurodeles waltlii (Urodela)*

ŠERMAN, D. M.Sc. — Inst. of Biol., Univ. of Zagreb, Šalata, ZAGREB, Yugoslavia

a Analysis of soluble proteins in organogenesis. *Rattus norvegicus (Rodentia)* (in collaboration with N. ŠKREB)

SERRI, F. M.D., Prof. — Dept. of Dermatol., School of Med., Univ. of Pavia, Policlinico S. Matteo, 27100 PAVIA, Italy

a Morphology and physiology of fetal skin. *Homo sapiens (Primates)*

b Microbiochemistry and histochemistry of carbohydrate and intermediate metabolism enzymes in fetal skin, especially developmental changes of enzyme activities. *Homo sapiens (Primates)*

SETO, F. Ph.D. — Dept. of Zool., Univ of Oklahoma, 730 South Oval, Room 222, NORMAN, Okla. 73069, U.S.A.

a The ontogenetic appearance and maturation of the primary homograft rejecting and primary humoral antibody producing potential in embryos and growing juveniles. *Gallus domesticus (Aves)*

SETOGUTI, T. Dr.Med., Prof. — First Dept. of Anat., Gifu Univ. School of Med., Tsukasa-machi, GIFU, Japan

a Electron microscopic study of mast cell development. *Triturus pyrrhogaster (Urodela)*

ŠEVČENKO, Mrs. G. MUDr. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia

a Development of taste buds (electron microscopic and cytochemical studies). *Homo sapiens (Primates)*

SHAAYA, E. Ph.D. — Physiol.-Chem. Inst., Philipps-Univ., 355 MARBURG/Lahnberge, W.Germany

a Control of nucleic acids and protein synthesis by ecdysone and juvenile hormone during postembryonic development. *Periplaneta americana (Dictyoptera), Calliphora erythrocephala (Diptera)*

b The role of juvenile hormone in the synthesis of protocatechuic acid glucoside in the accessory sex glands. *Periplaneta americana (Dictyoptera)*

SHAH, R. V. Ph.D. — Dept. of Zool., Fac. of Sci., M.S. Univ. of Baroda, BARODA-2, India

a Tail regeneration in embryos and adults. *Gekko* spec., *Mabuya* spec. *(Lacertilia)*

SHANKLIN, D. R. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.

a Pathology and pathogenesis of developmental systems

SHAPPIRIO, D. G. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

a Developmental physiology and biochemistry, especially growth and metamorphosis. *(Saturniidae,* etc., *Lepidoptera; Chironomidae,* etc., *Diptera)*

SHAVER, Miss E. L. Ph.D. — Dept. Anat., Univ. Western Ontario, LONDON, Ont., Canada

a Cytogenetics of blastocysts under various experimental conditions especially aging ova, effect of drugs on pre-implantation stages. *Oryctolagus cuniculus (Lagomorpha)*

SHAVER, J. R. Ph.D., Prof. — Zool. Dept., Biol. Res. Center, Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.

a Investigations of specificity of jelly-coat in fertilization (immunology, biochemistry). *Rana clamitans, R. pipiens (Anura)*

b Egg transfer studies between species and genera. *Rana* spec., *Bufo* spec. *(Anura)*

c Fluorescence microscopy and histochemistry of oviducal secretions. *(Raniidae, Anura)*

d Studies on cleavage-block produced by antibodies. *Rana* spec. *(Anura)*

e Effects of tissue-specific antibodies on embryonic differentiation. *(Anura)*

SHEA, S. M. M.D. — Dept. of Pathol., Harvard Med. School, 25 Shattuck St., BOSTON, Mass. 02115, U.S.A.

SHEN, S. C. Ph.D. — Dept. of Anat., Columbia Univ., 630 W. 168th St., NEW YORK, N.Y. 10032, U.S.A.

SHEPARD, T. H. M.D., Prof. — Central Lab. for Human Embryol., Dept. of Pediat., School of Med., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

a Development and function of fetal thyroid (autoradiography, organ culture). *Homo sapiens (Primates)*

b Effect of rubella virus on the fetus. *Homo sapiens (Primates)*

c Effect of galactoflavin on the fetus. *Rattus* spec. *(Rodentia)*

d Histology and biochemistry of achondroplasia (ac/ac strain; organ culture, radio-isotopes) *Oryctolagus cuniculus (Lagomorpha), Homo sapiens (Primates)*

e Effects of teratogens on embryos in vitro. *Rattus norvegicus (Rodentia)* (in collaboration with T. TANIMURA)

SHERBET, G. V. Ph.D. — Chester Beatty Research Inst., Inst. of Canc. Research, Royal Canc. Hosp., Fulham Rd., LONDON S.W.3, England

a Morphogenetic effects of follicle-stimulating hormone. *Gallus domesticus (Aves)* (in collaboration with Miss M. S. LAKSHMI)

b Behaviour of neoplastic cells transplanted into embryos. *Gallus domesticus (Aves)* (in collaboration with Miss M. S. LAKSHMI)

SHERIDAN, J. D. D.Phil. — Dept. of Zool., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

a Determination of the permeability properties of low-resistance junctions between reaggregating embryonic cells, using electrophysiological methods, current passing and intracellular dye injection. *Xenopus laevis* and others *(Amphibia)*

SHIELD, J. W. Ph.D. — Zool. Dept., Univ. of W.Australia, NEDLANDS, W.Australia 6009, Australia

a Development of homeostatic mechanisms in respiration, anoxia tolerance, respiratory control in neonatal animals ("pouch fetuses"). *Dasyurus geoffroyi, Setonix brachyurus (Marsupialia)*

b Development of metabolism, especially energy metabolism in neonatal and juvenile animals. *Dasyurus geoffroyi, Setonix brachyurus (Marsupialia)*

c Development of homeothermy. *Dasyurus geoffroyi, Setonix brachyurus (Marsupialia)*

SHIN-IKE, T. D.Sc., Prof. — Biol. Lab., Osaka Dental Coll., Saka, HIRAKATA, Osaka Pref., Japan

SHIOMI, T. Dr., Prof. — Dept. of Genet., School of Med., Nagasaki Univ., 12-4, Sakamoto-machi, NAGASAKI, Japan

a Radiation genetics (embryo, germ cells). *Drosophila melanogaster (Diptera)*

SHIRAI, H. B.Sc. — Lab. of Physiol., Ocean Research Inst., Univ. of Tokyo, Minamidai 1-15, Nakano-ku, TOKYO, (164) Japan

a Mechanism of spawning. *Asterias amurensis, Asterina pectinifera (Asteroidea)*

b Electron microscopic study on spawning and oocyte maturation. *(Asteroidea)*

SHOGER, R. L. Ph.D., Prof. — Dept. of Biol., Carleton Coll., NORTHFIELD, Minn. 55057, U.S.A.

SHOSTAK, S. Ph.D. — Dept. of Biol., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.

a The mechanism and control of cell movement during homeostasis and budding; role of collagen-like protein in the mesoglea. *Hydra viridis, H. oligactis, H. pseudoligactis, H. pirardi, H. fusca (Hydrozoa)*

SHUKUYA, R. M.D., Prof. — Dept. of Biochem., Nippon Med. School, 1-1-5, Sendagi, Bunkyo-ku, TOKYO, Japan

a Genetic control of hemoglobin switch during metamorphosis. *Rana catesbeiana (Anura)* (in collaboration with A. KAJITA and K. HAMADA)

b Change of isozyme patterns during metamorphosis. *Rana catesbeiana (Anura)* (in collaboration with A. KAJITA)

c Control of enzyme formation and activity in liver during development. *Rana catesbeiana (Anura)*

SHULOV, A. D.Sc., Prof. — Dept. of Entomol. and Venomous Anim., The Hebrew Univ., JERUSALEM, Israel

SHUPE, J. L. D.V.M., Prof. — Vet. Sci. Dept., Utah State Univ., LOGAN, Utah 84321, U.S.A.

a Congenital malformations, especially musculo-skeletal and cleft palate. *Bos taurus, Ovis aries (Artiodactyla)*

b Congenital anterior polar cataracts, cleft lip and cleft palate. *Canis familiaris (Carnivora)*

c Congenital multiple exostosis (hereditary osteochondromatosis). *Equus caballus (Perissodactyla)*

SHUTE, C. C. D. M.D. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England

a Segmentation of vertebrae; development of arcualia and centra. *(Vertebrata)*

SICHEL, G. M.D., Prof. — Ist. di Zool., Univ. di Catania, Via Androne 81, 95124 CATANIA, Italy

a Regeneration (origin of blastema cells). *(Sabellimorpha, Nereidae, Polychaeta)*

SIDKY, Y. A. Ph.D. — Dept. of Zool., Fac. of Sci., Univ. of Alberta, EDMONTON, Alta., Canada

a Comparison between the development of the immune reaction of adult hibernating animals and newborns. *Citellus tridecimlineatus (Rodentia)*

b The possible inductive role of the thymus in immune reaction development. *Citellus tridecimlineatus (Rodentia)*

SIDOROVA, Mrs. V. F. Dr.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

SIGNORET, J. Dr.ès Sci., Prof. — Biol. et Ecol., Univ. de Caen, 14 CAEN, France •

a Study of nuclear differentiation and specific activities by means of nuclear transplantation. *Ambystoma mexicanum (Urodela)*

b Study of chromosome changes during cellular differentiation. *Ambystoma mexicanum (Urodela)*

SIGOT, M. Dr.ès Sci. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49 bis Av. de la Belle Gabrielle, 94 NOGENT-sur-MARNE, France
— Lab. d'Embryol. Expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France

a Morphogenèse du tube digestif en culture in vitro. *Gallus* spec. *(Aves)*

SIGOT (LUIZARD), Mrs. M. F. Lic.ès Sci. — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94 NOGENT-sur-MARNE, France
— Lab. d'Embryol. Expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France

a Culture de tissus cancéreux sur des organes embryonnaires de poulet explantés in vitro. *Mus musculus, Rattus norvegicus, Homo sapiens (Mammalia)*

SILÉN, L. K. P. Fil.Dr., Prof. — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, Box 6801, S-113 86 STOCKHOLM, Sweden

a Embryology. *(Bryozoa)*

SILVA MURTA, Mrs. I. M. da B.Sc. — Dept. de Biol. Geral, Inst. de Ciênc. Biol. da U.F.M.G., Rua Carangola 288 - 4°andar, C.P. 253, BELO HORIZONTE, M.G., Brazil

a Embryology of nephridia. *Peripatus acacioi (Onychophora)*

SIMKISS, K. Ph.D., Prof. — Dept. of Zool., Queen Mary Coll., LONDON E.1, England

a Respiratory acidosis in embryos

SIMON, M. I. Ph.D. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.

a Mechanism of molecular assembly in development of subcellular organelles

SIMONS, J. A. Ph.D. — Dept. of Biol., Coll. of William and Mary, WILLIAMSBURG, Va. 23185, U.S.A.

a Induction of d-aminolevulinate synthetase and the regulation of heme biosynthesis during development. *Gallus domesticus (Aves)*

SIMPSON, S. B. Ph.D. — Dept. of Anat., Developm. Biol. Center, Case Western Reserve Univ., 2109 Adelbert Rd., CLEVELAND, Ohio 44106, U.S.A.

a Tail regeneration. *Triturus viridescens (Urodela), Anolis carolinensis (Lacertilia)*

b Spinal cord regeneration. *Anolis carolinensis (Lacertilia)*

c In vitro differentiation of promuscle cells from tail regenerate. *Anolis carolinensis (Lacertilia)*

SIMS, R. T. M.A., M.B. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England
a Biophysical investigations of factors affecting cellular differentiation in epidermis and hair follicles. *(Mammalia)*
SINCLAIR, J. G. Ph.D., Prof. (Emer.) — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex. 77550, U.S.A.
a Development of vertebral vascular pattern in embryos. *Stenella coeruleoalbus (Cetacea)*
b Development of the pituitary gland and ear of embryos. *Stenella coeruleoalbus (Cetacea)*
SINGER, M. Ph.D., Prof. — Dept. of Anat., Developm. Biol. Center, School of Med., Case Western Reserve Univ., 2109 Adelbert Rd., CLEVELAND, Ohio 44106, U.S.A.
a Regeneration. *(Amphibia)*
SINGER, R. D.Sc., Prof. — Dept. of Anat., Div. of Biol. Sci., Univ., of Chicago, 1025 East 57th St., CHICAGO, Ill. 60637, U.S.A.
a General embryology. *Homo sapiens (Primates)*
b General embryology. *Hystrix africaeaustralis (Rodentia)*
SINGH, I. Ph.D., Prof. — Dept. of Anat., Med. Coll., ROHTAK, India
a Mitotic rate in argyrophile and argentaffin cells of the embryonic gastrointestinal tract. *Homo sapiens (Primates)*
b Distribution of Paneth cells in the fetal gastrointestinal tract. *Homo sapiens (Primates)*
SINGH-ROY, K. K. Dr.phil. — Cell Research Unit., Dept. of Zool., Univ. of Calcutta, 35 Ballygunje Circular Rd., CALCUTTA-19, India
SINGH, R. P. Ph.D. — Dept. of Anat., Univ. of Western Ontario, LONDON, Ont., Canada
a Developmental pathology and teratogenesis. *Homo sapiens (Primates)*
b Histochemical studies of gonadal development. *Homo sapiens (Primates)*
SINHA, A. K. Ph.D. — Dept. of Zool., Presidency Coll., CALCUTTA-12, W.Bengal, India
SIRAKAMI, K. I. D.Sc., Prof. — Dept. of Biol., Yamanashi Univ., KÔFU, Japan
a Movement of isolated embryonic cells, studied by microcinematography. *(Echinodermata; Pisces; Amphibia)*
b Cytokinesis of cleavage, studied by time-lapse microcinematography. *(Echinodermata; Pisces; Amphibia)*
SIRLIN, J. L. Dr.nat.sci., Prof. — Dept. of Anat., Med. Coll., Cornell Univ., 1300 York Ave., NEW YORK, N.Y. 10021, U.S.A.
SISCA, R. D.D.S., Ph.D. — Dept. of Histol. and Embryol., Coll. of Dental Surg., Univ. of Maryland, Lombard and Green St., BALTIMORE, Md. 21201, U.S.A.
SISKEN, J. — Depts. of Microbiol. and Biochem., Med. Center, Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.
a Analysis of the physico-chemical properties of DNA in differentiating cells. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus musculus, Rattus rattus (Rodentia), Homo sapiens (Primates)* (in collaboration with S. P. MODAK)
SJOLTE BYSKOV, Mrs. A. G. — Finsen Lab., Finsen Inst., 49 Strandboulevard, DK-2100 COPENHAGEN, Denmark
a Electrophysiological studies on developing embryos. *Xenopus laevis (Anura), Ambystoma*
SJÖSTRAND, F. S. M.D., Ph.D., Prof. — Dept. of Zool., Univ. of California, LOS ANGELES, Calif. 90024, U.S.A.
a Descriptive and biochemical molecular morphogenesis
b Morphogenesis of retinal receptor cells
c Morphogenesis of mitochondria, Golgi apparatus and other cytoplasmic membranes
SKALKO, R. G. Ph.D., Prof. — Dept. of Anat., Louisiana State Univ., 1542 Tulane Ave., NEW ORLEANS, La. 70112, U.S.A.
SKINNER, D. M. Ph.D., Prof. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.
a Metabolism of nucleic acids in the molt cycle. *Gecarcinus lateralis (Decapoda, Crustacea)*
b Studies on functions of satelite DNA's and macromolecular metabolism in regenerating tissues. *Gecarcinus lateralis (Decapoda, Crustacea)* (in collaboration with Miss M. S. KERR and D. E. GRAHAM)
SKOBLINA, M. N. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Effect of gonadotropins and changes in the germinal vesicle and in the oocyte cytoplasm during maturation *(Acipenseridae, Chondrostei; Amphibia)* (in collaboration with Mrs. T. A. DETTLAFF)
ŠKREB, N. M.D., D.Sc., Prof. — Inst. of Biol., Univ. of Zagreb, Šalata, ZAGREB, Yugoslavia
a Investigation of early differentiation; transplantation, in vitro culture, autoradiography. *Rattus norvegicus (Rodentia)* (in collaboration with Mrs. B. LEVAK (ŠVAJGER), D. SOLTER and A. ŠVAJGER)
b Analysis of soluble proteins in organogenesis. *Rattus norvegicus (Rodentia)* (in collaboration with D. ŠERMAN)

c Investigation on developmental capacities of tissues of the chorioallantoic membrane. *Gallus domesticus (Aves)* (in collaboration with A. ŠVAJGER and Mrs. B. LEVAK (ŠVAJGER))

SLABÝ, O. D.Sc., Prof. — Inst. of Histol. and Embryol. Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia •

SLACK, Mrs. C. B.Sc. — Dept. of Biol. as applied to Med., The Middlesex Hosp. Med. School, LONDON W.1, England

a Electron microscopy and histochemistry of ovulation. *Mus musculus (Rodentia) mexicanum (Urodela)*

SLÁDEČEK, F. RNDr., DSc., Prof. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia •

a Transplantation of nuclei in relation to the development of antigenic characteristics. *(Amphibia)* (in collaboration with A. ROMANOVSKÝ)

b Transplantation of nuclei in relation to nucleic acids. *(Amphibia)* (in collaboration with J. NEDVÍDEK)

c Number of cell generations in relation to cell determination. *(Amphibia)*

SLÁMA, K. C.Sc. — Dept. of Physiol., Inst. of Entomol., Czechoslov. Acad. of Sci., Na Folimance 5, PRAHA 2, Czechoslovakia

SLIJPER, E. J. † Dr., Prof. — Zool. Lab., Univ. of Amsterdam, Plantage Doklaan 44, AMSTERDAM, Netherlands
(deceased)

SLÍPKA, J. Dr.med., Dr.rer.nat., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia

a The development and teratology of the branchial region. *(Amniota,* incl. *Homo sapiens)*

b The early development of the thyroid gland. *(Amniota,* incl. *Homo sapiens)*

SMART, I. H. M. M.B., Ch.B. — Dept. of Anat., Univ. of Dundee, DUNDEE DD1 4HN, Scotland, U.K.

a Histogenesis of nerve cells and neuroglia. *Mus musculus (Rodentia)*

b Studies on the geometry of the egg. Various spp. *(Aves)*

SMIRNOVA, Mrs. I. E. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

SMIT, A. L. D.Sc., Prof. — Dept. of Zool., Univ. Coll., Private Bag 4001, DURBAN, S.Africa

a The ontogenesis of the head skeleton and musculature. *Dendroaspis angusticeps, D. polylepis (Ophidia)*

SMIT, P. Med.drs. — Div. of Exper. Morphol., Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands

a Effect of X-rays on ovarial oogenesis and ovulation. *Mus* spec. *(Rodentia)* (in collaboration with H. A. L. TRAMPUSCH)

SMITH, A. E. S. Ph.D. — Dept. of Developm. Biol., Div. of Biol., Calif. Inst. of Technol., PASADENA, Calif. 91109, U.S.A.

SMITH, C. W. Ph.D. — Dept. of Bot., Univ. of Hawaii, 2450 Campus Rd., HONOLULU, Hawaii 96822, U.S.A.

a Factors controlling the development of propagules. *Boussingaultia gracilis (Chenopodiaceae)*

b Control of hydration and reactivation of dormant systems. *Artemia salina (Anostraca, Crustacae),* seeds *(Angiospermae)*

SMITH, J. G. B.S. — Botany Dept., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

SMITH, K. D. Ph.D. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.

a Biochemical studies on gene action during development. *Arbacia punctulata (Echinoidea), Ascidia nigra (Tunicata), Mus musculus (Rodentia)*

SMITH, L. D. Ph.D. — Purdue Univ., LAFAYETTE, Ind. 47907, U.S.A. •

SMITH, M. S. R. Ph.D. — Dept. of Zool., Univ. of Southampton, SOUTHAMPTON SO9 5NH, England

a Early embryology with main reference to histochemistry. *Mus musculus (Rodentia)*

SMITHBERG, M. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

SMITTEN, Mrs. N. A. Cand.biol.sci. — Lab. of Horm. Regulations, Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

SMYTH, J. D. Sc.D., Prof. — Dept. of Zool., School of Gen. Studies, Australian Nat. Univ., P.O. Box 4, CANBERRA, A.C.T. 2600, U.S.A.

a In vitro differentiation. *Echinococcus granulosus (Cestoda)*

SOBOTKA, P. M.D., CSc. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia

a Relationships between biochemical and electrophysiological correlates of brain development in ontogenesis. *Rattus norvegicus (Rodentia)*

SOFER, W. H. Ph.D. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.

a Changes in alcohol dehydrogenase during development. *Drosophila melanogaster (Diptera)*
b Changes in nucleic acids during development. *Arbacia punctulata (Echinoidea)*

SOJKA, N. J. D.V.M. — Vivarium, School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va. 22903, U.S.A.
a Influence of hormonal state of the female on the fertilizing ability of sperm (comparative study). *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia), Canis familiaris (Carnivora)*
b Reproductive physiology; characterization of semen, artificial insemination techniques. *Felis catus (Carnivora)*

SOKOLOVA, Mrs. Z. A. Cand.biol.sci. — Chair of Embryol., Biol. Fac., State Univ. of Moscow, Lenin Hills, MOSCOW V-234, U.S.S.R.

SOLBANI, Mrs. L. Dipl.d'Etud.Sup. — Lab. de Morphogénét. Anim., Fac. des Sci., 1 Place Victor Hugo, 13 MARSEILLE 3, France
a Effects of X-ray irradiation upon adult morphogenesis. *Nereis diversicolor (Polychaeta)*

SOLÈRE, M. Dr.en Méd. — Lab. d'Histol.-Embryol. B, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France
a Development of the brain and sensory organs in 34 day-embryo. *Homo sapiens (Primates)*

SOLOGUB, Miss A. A. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Metaplastic potencies of embryonic and larval eye for lens and retina regeneration. *Leuciscus bergi (Cyprinidae), Anoptichthys jordani (Characidae, Teleostei)* (in collaboration with G. V. LOPASHOV)
b Stimulation of metaplasia of the pure pigment epithelium of adult animals into retina by means of agents from larval (or embryonic) retina. *Rana temporaria, R. esculenta (Anura), Gallus domesticus (Aves), Mus musculus (Rodentia)* (in collaboration with G. V. LOPASHOV)
c Autoradiographic studies of the cell cycles at metaplasia of the pigment epithelium into retina. *Rana temporaria, R. ridibunda (Anura)*

SOLOMON, J. B. Ph.D., D.Sc. — Dept. of Bacteriol., Univ. of Aberdeen, ABERDEEN, Scotland, U.K.
a The foetus as an immunologically protected allograft: the chemical nature of the fibrinoid layer on giant cells of trophoblast origin. *Mus musculus (Rodentia)*

SOLTER, D. M.D. — Inst. of Biol., Univ. of Zagreb, Šalata, ZAGREB, Yugoslavia
a Investigation of early differentiation; autoradiography. *Rattus norvegicus (Rodentia)* (in collaboration with N. ŠKREB)

SOLTYŃSKA (MARCINKOWSKA), Mrs. M. Mgr. of Sci. — Inst. of Zool., Warsaw Univ., WARSZAWA 64, Poland

SOMA, T. B.Agr.Sc. — Natl. Inst. of Anim. Industry, CHIBA-shi, 280 Japan
a Transfer of fertilized eggs by non-surgical techniques. *Bos taurus (Artiodactyla)*

SOMERS, G. F. D.Sc., Ph.D. (Med.) — Pharm. Res. Labs., Reckitt & Sons Ltd., Dansom Lane, HULL, E.Yorks., England
a The teratogenic effects of drugs; testing of drugs for foetal toxicity. *(Mammalia)*

SONDHI, K. C. Ph.D., Prof. — Dept. of Physiol. and Zool., Rutgers Univ., NEWARK, N.J. 7102, U.S.A.
a Interacting, compensatory developmental systems and ageing. *Drosophila melanogaster (Diptera)*
b Diffusion - reaction mechanisms in the genesis of primary patterns in morphogenesis. *Drosophila melanogaster (Diptera)*
c Development, nucleic acids, and ageing. *Drosophila melanogaster (Diptera)*

SORIANO, L. I. M.D. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
a Studies on RNA synthesis in embryonic skin. *Gallus gallus (Aves), Mus musculus (Rodentia)*

SOUPART, P. M.D., Ph.D., Prof. — Dept. of Obstet. and Gynecol., School of Med., Vanderbilt Univ., NASHVILLE, Tenn. 37203, U.S.A.

SPAZIANI, E. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a Mechanism of ovarian and testicular hormone action on growth and development of reproductive tissues; uterus, seminal vesicles, prostate. *Rattus norvegicus (Rodentia)*
b Hormonal control of melanocyte differentiation and pigment synthesis. *Rattus norvegicus (Rodentia)*

SPECTOR, C. Ph.D. — Dept. of Biol., Univ., of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A.
a The possible control of development by differential biosynthesis of specific gibberellins. *Gibberella fujikuroi (Ascomycetes)*

SPENCER, R. P. M.D., Ph.D., Prof. — Dept. of Radiol., Yale Univ., 333 Cedar St., NEW HAVEN, Conn. 06510, U.S.A.
a Development of heart weight and blood volume. *(Delphinoidea, Cetacea), (Mammalia)*
b Development of kidney. *(Mammalia)*
c Development of liver and of spleen. *(Mammalia* and others)

SPERRY, R. W. Ph.D. — Div. of Biol., Calif. Inst. of Technol.,, PASADENA, Calif. 91109, U.S.A. •
a The development and regeneration of behavioral nerve networks. (lower *Vertebrata)*
SPIEGEL, Mrs. E. SCLUFER Ph.D. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H. 03755, U.S.A.
a Protein changes in development. *Lytechinus pictus, Strongylocentrotus purpuratus (Echinoidea), Rana pipiens, R. catesbeiana (Anura)* (in collaboration with M. SPIEGEL)
b Role of enzyme induction in development. *Rana pipiens, R. catesbeiana (Anura)* (in collaboration with M. SPIEGEL)
c Biochemistry of metamorphosis. *Rana pipiens, R. catesbeiana (Anura)*
SPIEGEL, M. Ph.D., Prof. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H. 03755, U.S.A. •
a Protein changes in development. *Arbacia punctulata, Lytechinus pictus, Strongylocentrotus purpuratus (Echinoidea), Rana pipiens, R. catesbeiana (Anura)* (in collaboration with Mrs. E. S. SPIEGEL)
b Role of enzyme induction in development. *Rana pipiens, R. catesbeiana (Anura)* (in collaboration with Mrs. E. S. SPIEGEL)
SPIRITO, A. Dott., Prof. — Ist. di Biol. Gen., Fac. di Med., Univ. di Roma, Policlinico Umberto I, 00100 ROMA, Italy •
SPIROFF, B. E. N. Ph.D. — Dept. of Biol., Loyola Univ., 6525 N. Sheridan Rd., CHICAGO, Ill. 60626, U.S.A.
a Effects of thalidomide on development. *(Aves)*
b Function and structure of the epiphysis. *(Aves)*
SPRATT, N. T., Jr. Ph.D., Prof. — Dept. of Zool., Coll. of Biol. Scis., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A. •
a Investigating the nutrient requirements essential to morphogenesis and growth in the early stages of development (pre-streak and streak blastoderms). *Gallus domesticus (Aves)*
b Survey of dehydrogenase enzymes in early embryos. 1. Localization of enzyme activity. 2. Structural integrity and enzyme activity. *Gallus domesticus (Aves)*
c Cytological study of the developmental center (organizer). *Gallus domesticus (Aves)*
d Anlysis of mechanism of morphogenetic movements by time-lapse cinematography. *Gallus domesticus (Aves)*
e Analysis of dynamic population patterns (pattern formation by free-swimming, ciliated and flagellated organisms). *Tetrahymena* spec. *(Ciliata), Euglena* spec. *(Euglenophyceae) Arbacia punctulata (Echinoidea)*
f Integrative mechanisms in early development. *(Aves)*
g Role of the microenvironment in cell differentiation. *(Aves)*
SPREY, Th. E. M.Sc. — Zool. Lab., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands
a Histochemical aspects of differentiation of imaginal discs. *Calliphora erythrocephala (Diptera)*
b Studies of cell proliferation and degeneration during development of imaginal discs. *Calliphora erythrocephala (Diptera)*
SPRINGER, Ch. A. M.S. — Dept. of Biol., Carnegie-Mellon Univ., PITTSBURGH, Pa., U.S.A.
SRB, V. — Dept. of Biol., Med. Fac., Charles Univ., Šimkova 870, HRADEC KRÁLOVÉ, Czechoslovakia
a Studies of chromosomes in the developing embryo; influence of ionizing radiation or chemomutagens on karyotype. *Gallus gallus (Aves), Mus musculus (Rodentia)*
STAAL, G. B. Dr., Ir. — Lab. of Entomol., Agric. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands
STACKHOUSE, H. L. Ph.D. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada
STADLER, H. Cand.phil. — Div. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, CH-3000 BERN, Switzerland
a Thyroxine and RNA synthesis in tadpole tissues. *Xenopus laevis (Anura)* (in collaboration with R. WEBER)
STAGNI, Miss A. Dr., Prof. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy
a Sex determination and sex differentiation. *Chlorohydra viridissima (Hydroidea)*
b Cytochemical and electron microscopical study of oogenesis and spermatogenesis. *Chlorohydra viridissima (Hydroidea)*
c Cytometric, cytochemical and biochemical study of nucleolus during oogenesis. *Spirorbis pagenstecheri (Serpulidae, Polychaeta)*
d Inhibition by antibiotics of steroid hormone-induced sex-reserval in tadpoles. *Rana dalmatina (Anura)*
STAMPA (DI CASTRO), Mrs. M. Dr.Biol.Sci. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italy
a Growth and differentiation of regeneration blastema in vivo and in vitro. *Planaria torva, Dugesia etrusca (Turbellaria)* (in collaboration with P. PASQUINI and H. MANELLI)

STANGE, Miss L. Dr.rer.nat., Prof. — Inst. für Botanik, Techn. Hochschule, Herrenhäuser Str. 2, 3 HANNOVER, W.Germany
STANISSTREET, M. B.Sc. — Anat. Dept., The Med. School, University Walk, BRISTOL BS8 1TD, England
a Investigation of protein changes during early developmental stages by immunological and electrophoretic methods. *Xenopus laevis (Anura)*
STAPLES, R. E. Ph.D. — Merck Inst. for Therapeutic Research, WEST POINT, Pa. 19486, U.S.A.
a Zygote development (physiological, biochemical). *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus, Mus musculus (Rodentia)*
b Teratology. *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus, Mus musculus, Mesocricetus auratus (Rodentia)*
STARCK, D. Dr.med., Prof. — Dr. Senckenberg Anat. Inst., Med. Fak. der Univ., Ludwig Rehnstr. 14, FRANKFURT/Main-Süd, W.Germany •
STARRE, H. van der Drs.biol. — Dept. of Med. Anat. and Embryol., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands
a Eye lens induction in vitro. *Gallus domesticus (Aves)*
b Histochemistry of eye lens inductors. *Gallus domesticus (Aves)*
STARRE (VAN DER MOLEN), Mrs. L. G. van der M.Sc. — Zool. Lab., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands
a Histochemical aspects of embryonic development. *Calliphora erythrocephala (Diptera)*
ŠTASTNÝ, F. M.D. — Lab. of Embryophysiol., Inst. of Physiol., Fac. of Gen. Med., Charles Univ., Albertov 5, PRAGUE 2, Czechoslovakia
a Development of extracellular and intracellular environment of foetal brain tissue (physical and chemical). *(Aves; Mammalia)*
b Development of membrane ATP-ase system in cellular and subcellular elements of fetal brain tissue. Relations to the endocrine factors. *(Aves)*
STEARNER, Miss S. P. Ph.D. — Div. of Biol. and Med. Research, Argonne Natl. Lab., 9700 South Cass Ave., ARGONNE, Ill. 60439, U.S.A.
a Radiation effects on developing circulatory system
STEDING, G. Priv.Doz., Dr.med. — Anat. Inst. der Univ., Kreuzbergring 36, 34 GÖTTINGEN, W.Germany
a Experimente zur Entwicklung des Rückenmarkes. *Gallus gallus (Aves)*
b Selbstdifferenzierung der Somiten. *Gallus gallus (Aves)*
c Frühentwicklung. *Gallus gallus (Aves)*
d Strukturentwicklung des Uterus. *Homo sapiens (Primates)*
e Experimente zur Entwicklung der Extremitäten. *(Aves)*
f Experimentelle Analyse der Epitheldifferenzierung. *Gallus gallus (Aves)*
g Autoradiographische Analyse von Entwicklungsbewegungen embryonaler Organanlagen. *Gallus gallus (Aves)*
STEER, H. W. Ph.D. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E. 1, England
a Mechanism of implantation (in vivo and in vitro) by ultrastructural and chemical analyses. *Oryctolagus cuniculus (Lagomorpha)*
b Morphology and composition of the trophoblast. *Oryctolagus cuniculus (Lagomorpha)*
STEFAN, Miss Y. Dr.ès Sci. — Lab. de Zool. et d'Embryol. Expér., Univ. de Strasbourg, 12 rue de l'Université, STRASBOURG, France
STEFANELLI, A. Dr., Prof.ord. — Inst. di Anat. Comp. "Battista Grassi", Fac. di Sci., Univ. di Roma, Via A. Borelli 50, 00161 ROMA, Italy •
a Nervous microsystems in vitro. *Gallus domesticus (Aves)*
STEGEMAN, Miss J. H. J. — Zool. Lab., Univ. of Amsterdam, Plantage Doklaan 44, AMSTERDAM, Netherlands
a Foetal growth in relation to size and development of placenta during pregnancy. *Ovis aries (Artiodactyla)*
STEGNER, H.-E. Dr.med. — Universitäts-Frauenklinik, Martinistr. 52, 2-HAMBURG 20, W.Germany
a Electron microscopy of oogenesis. *Homo sapiens (Primates)*
b Experimental developmental morphology; electron microscopy. *(Rodentia)*
STEIN, Miss K. F. Ph.D., Prof. (Emer.) — Dept. of Biol. Sci., Clapp Lab., Mount Holyoke Coll., SOUTH HADLEY, Mass. 01075, U.S.A.
a The culture in vitro of mutant embryos, e.g. Lp/Lp; tracer studies *(Rodentia)*
b Development of inherited anomalies, e.g. eyes open at birth, circling behaviour. *(Rodentia)*
STEINBERG, M. S. Ph.D., Prof. — Dept. of Biol., Princeton Univ., PRINCETON, N.J. 08540, U.S.A. •
a Direct measurements of strengths of intercellular adhesions among embryonic cells. *Gallus domesticus (Aves)*
b Mechanisms in cell aggregation and tissue reconstruction. *(Porifera), Rana pipiens (Anura), Gallus domesticus (Aves)*
c Physics and chemistry of cell surfaces in relation to cell adhesion. *(Porifera), Gallus domesticus (Aves)*

d Mechanisms governing "contact inhibition" of mitosis and of cell movement (various tissue culture cell strains)
e Mechanisms of nerve-end organ integration (studies of reflex behavior after regeneration of sensory nerves into a topographically rearranged integumental field). *Rana pipiens (Anura)*

STEINITZ, H. Ph.D., Prof. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

STENGER (HAFFEN), Mrs. K. E. Dr.ès. Sci. — Inst. d'Embryol. et Tératol, expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France •
a Recherches sur la differenciation et l'intersexualité in vitro et in vivo des gonades embryonnaires. *(Aves)*
b Biosynthèse des hormones stéroides sexuelles par les gonades embryonnaires. *(Aves)* (en collaboration avec Mrs. L. CEDARD)

STÉPHAN, F. Dr.ès Sci., Prof. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Catherine, 54 NANCY, France
a Les malformations cardio-vasculaires: analyse causale de l'action tératogène de diverses substances, par ex. bleu trypan. *Gallus gallus (Aves)*
b Tératologie: origine, évolution et transmission des lésions, excroissances et duplications. *Dugesia tigrina (Turbellaria)* (en collaboration avec J. SCHILT)
c Développement du système trachéen chez la larve (étude expérimentale). *Tipula flavolineata (Diptera)* (en collaboration avec J. C. PIHAN)

STÉPHAN (DUBOIS), Mrs. F. Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Nancy, 30 rue Ste Catherine, 54 NANCY, France •
a Migration et différenciation des cellules de régénération. *(Planariidae; Oligochaeta microdrila; Polychaeta errantia)*
b Anomalies de la régénération. *(Planariidae; Olichaeta microdrila; Polychaeta errantia)*

STEPHENSON, N. G. Ph.D. — School of Biol. Sci., Zool. Building, Univ. of Sydney, SYDNEY, N.S.W. 2006, Australia
a Culture of embryonic organs and tissue explants under pressure. *(Vertebrata)*
b Action of malignant mammalian cells on pre-adult amphibian cells: in vitro and in vivo. *(Amphibia, Mammalia)*
c Descriptive embryology. *(Marsupialia)*

ŠTĚRBA, O. — Dept. of Morphol., Inst. of Vertebr. Zool., Czechoslov. Acad. of Sci., Květná 8, BRNO, Czechoslovakia
a Prenatal development of muscles. *(Marsupialia; Insectivora; Chiroptera; Rodentia; Artiodactyla)*

STERN, C. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.
a Developmental genetics of pattern formation. *Drosophila melanogaster (Diptera)*
b Pleiotropic effect of genes. *Drosophila melanogaster (Diptera)*

STERN, H. Ph.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A. •
a Regulation of DNA synthesis during meiotic development. *Trillium erectum, Lilium longiflorum, Tulipa gesneriana, Vicia faba, Bellevalia romana (Angiospermae)*
b Developmental genetics. *Marchantia polymorpha (Hepaticae)*

STERN, K. M.D., Prof. — Dept. of Pathol., Univ. of Illinois, 1853 W. Polk St., CHICAGO, Ill. 60612, U.S.A.
a Relationship of reticulo-endothelial function to growth processes, as exemplified by liver regeneration after partial hepatectomy. *Rattus* spec., *Mus musculus (Rodentia)*
b Effect on organ growth of administration of isogeneic subcellular tissue fractions to weanlings of inbred strains. *Mus musculus (Rodentia)*

STERN, S. Ph.D. — Div. of Popul. Dynamics; School of Hyg. and Publ. Health, Johns Hopkins Univ., 615 N. Wolfe St., BALTIMORE, Md. 21205, U.S.A.
a Carbohydrate metabolism in pre-implantation embryos as related to glycogen metabolism; culture of embryos. *Mus musculus (Rodentia), Homo sapiens (Primates)*
b Composition of ovarian and tubal secretions. *Mus musculus (Rodentia), Homo sapiens (Primates)*
c Hormonal control of ovulation. *Mus musculus (Rodentia)*
d Ultrastructure of pre-implantation embryos. *Mus musculus (Rodentia)*

STETLER, D. A. Ph.D. — Dept. of Botany, Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
a Effects of alkaloids and steroids on differentiation of tissue cultures. *Papaver somniferum (Papaveraceae)*

STEVEN, D. H. M.A., Vet.M.B. — Anat. School, Sub-Dept. of Vet. Anat., Univ. of Cambridge, Tennis Court Rd., CAMBRIDGE CB2 1QS, England
a Organization of placental blood vessels in relation to physiological exchange. *Ovis aries (Artiodactyla), Equus caballus (Perissodactyla)*

STEVENS, L. C. Ph.D. — The Jackson Lab., BAR HARBOR, Me. 04609, U.S.A. •
a Histogenesis of testicular teratoma (strain 129). *Mus musculus (Rodentia)*
b Developmental genetics. *Mus musculus (Rodentia)*

STEVENSON, J. ROSS Ph.D., Prof. — Dept. of Biol. Sci., Kent State Univ., KENT, Ohio 44240, U.S.A.
a Study of control of epidermal chitin biosynthesis for the developing cuticle by chemical assays and radiotracers. *Orconectes sanborni, O. obscurus (Decapoda, Crustacea)*

STEWART, J. A. Ph.D. — Biochem. Dept., Univ. of New Hampshire, DURHAM, N.H. 03824, U.S.A.
a A study of the turnover of proteins during central nervous system development. *Mus musculus (Rodentia)*

STINSON, B. D. Ph.D. — Dept. of Anat., Med. Coll., Cornell Univ., 1300 York Ave., NEW YORK, N.Y. 10021, U.S.A.

STOCK, A. Ph.D., Prof. — Dept. of Zool., Fac. of Sci., Univ. of New England, ARMIDALE, N.S.W. 2351, Australia
a Regeneration and the endocrine system. *Blattella germanica (Dictyoptera)* (in collaboration with A. F. O'FARRELL)

STOCKDALE, F. E. M.D., Ph.D. — Dept. of Med., School of Med., Stanford Univ., STANFORD, Calif. 94305, U.S.A.
a Mechanisms of skeletal muscle differentiation, with special reference to DNA synthesis and cell division. *Gallus domesticus (Aves)*
b Mechanisms of hormone-dependent differentiation in mammary gland tissue in vitro, with special reference to DNA synthesis and cell division. *Mus musculus (Rodentia)*

STOCUM, D. L. Ph.D. — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A.
a Regeneration. *(Vertebrata)*

STOLL, R. Dr.en Méd., Dr.ès Sci., Prof. — Lab. de Biol., Fac. de Méd., Univ. de Bordeaux, 33 BORDEAUX, France
a Différenciation sexuelle. *(Aves)*
b Physiologie des glandes endocrines embryonnaires. *(Aves)*
c Tératologie. *(Aves)*

STONE, L. S. Ph.D., Prof. — Anat. Dept., Yale Univ., 333 Cedar St., NEW HAVEN, Conn. 06520, U.S.A. •

STOUT, V. M. Ph.D. — Dept. of Zool., Univ. of Canterbury, Priv. Bag, CHRISTCHURCH, New Zealand
a Descriptive embryology. *Lepidurus apus (Notostraca, Crustacea), Daphnia magna (Cladocera, Crustacea)*

STRATFORD (MILLER), Mrs. B. F. Ph.D. — School of Anat., Univ. of Melbourne, PARKVILLE 3052, Vict., Australia
a Developmental anatomy and pathology of the placenta. *Homo sapiens (Primates)*
b Postnatal development of the lung. *Dasyuroides byrnei (Marsupialia)*

STRAUSS, F. M.D., Prof. — Dept. of Anat., Univ. of Bern, 26 Bühlstr., CH-3012 BERN, Switzerland •
a Comparative implantation and placentation. *(Mammalia)*
b Comparative anatomy of the female reproductive system. *(Mammalia)*

STRAY (BREISTEIN), Mrs. L. — Inst. of Anat., Univ. of Bergen, BERGEN, Aarstadvollen, Norway
a An experimental study of the development of the trigeminal ganglion. *Gallus domesticus (Aves)*
b Regeneration of the motor root of the trigeminal nerve following extirpation of the proximal portion of the trigeminal nerve and the trigeminal ganglion in early embryonal stages (Hamburger and Hamilton stages 16-17). *Gallus domesticus (Aves)*

STRAZNICKY, Ch. Ph.D. — Anat. Dept., Med. Univ., Dischka u 5, PÉCS, Hungary

STREETT, J. C. Ph.D. — Div. of Sci., Texas Wesleyan Coll., FORT WORTH, Tex. 76105, U.S.A.

STREIFF, W. Dr.ès Sci. — Lab. de Zool., Fac. des Sci., 14 CAEN, France

STROEVA, Miss O. G. Dr.biol.sci. — Lab. of Developm. Cytogenet., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

STRÖM, R. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, 751 22 UPPSALA, Sweden
a Larval development. *(Bryozoa)*

STRÖMBERG, J.-O. Fil.lic. — Dept. of Zool., Univ. of Lund, Helgonavägen 3, S-223 62 LUND, Sweden
a Early development and organogenesis. *Cyathura polita (Anthuridea), Bopyroides hippolytes, Hemiarthrus abdominalis, Pseudione crenulata (Epicaridea, Isopoda, Crustacea)*

STRUDEL, G. Dr.ès. Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S. 49 bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France •
a Développement du système nerveux orthosympathique. *(Aves)*
b Développement de la colonne vertébrale. *(Aves)*

c Rôle inducteur de la chorde et du tube nerveux; chondrogenèse. *(Aves)*
d Tératologie de la colonne vertébrale. *(Aves)*
e Ultrastructure du cartilage vertébral. *(Aves)*

STUBBS, J. D. Ph.D. — Dept. of Cell and Molec. Biol., School of Nat. Sci., San Francisco State Coll., SAN FRANCISCO, Calif. 94132, U.S.A.
a Development of techniques for assay and quantitation of differential gene activation with use of germinating spores as a model developmental system. *Bacillus subtilis (Bacteria)*

STUCHLY, Z. Dr., Prof. — Kat. i Zaklad Biol. Ogólnej, Med. Acad. of Wrocław, Bujwida 9, WROCŁAW, Poland

STURROCK, R. R. M.B., Ch.B. — Dept. of Anat., Univ. of Dundee, DUNDEE DD1 4HN, Scotland, U.K.
a Measurements of the distance between neuroglia nuclei in fibre tracts of the postnatal brain and its relation to the number of myelinated fibres present. *Mus musculus (Rodentia)*

STYCZYŃSKA-JUREWICZ, Mrs. E. Ph.D. — Nencki Inst. of Exper. Biol., Dept. of Exper. Hydrobiol., ul. Pasteura 3, WARSZAWA 22, Poland

SUBTELNY, S. Ph.D., Prof. — Dept. of Biol., Rice Univ., HOUSTON, Tex. 77001, U.S.A. •

SUCH (RAZIMBAUD), Mrs. J. Dr.Biol.anim. — Lab. de Zool. Expér., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France
a Recherches descriptives et expérimentales sur le développement embryonnaire de l'oeil composé. *(Insecta)*

SUDARWATI, Miss S. Drs. — The Bandung Inst. of Technol., Dept. of Chem. and Biol., Djalan Ganesa 10, BANDUNG, Indonesia
a Mesoderm formation in the blastula (stage 8+). *Xenopus laevis (Anura)*

SUGIE, T. Ph.D. — Natl. Inst. of Anim. Industry, CHIBA-shi, 280 Japan
a Transfer of fertilized eggs by non-surgical techniques. *Bos taurus, Capra hircus (Artiodactyla)*

SUGINO, H. D.Sc., Prof. — Dept. of Biol., Osaka Kyôiku Univ., Ten-noji-ku, OSAKA, 543 Japan •
a Differentiation of neoblasts. *Dugesia japonica (Turbellaria)*
b In vitro culture of blastema. *Dugesia japonica (Turbellaria)*

SUGIYAMA, M. D.Sc., Prof. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, (517) Japan •
a Physiological studies on fertilization and artificial parthenogenesis. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)* (in collaboration with M. ISHIKAWA)

SULLIVAN, G. E. Ph.D. — Dept. of Histol. and Embryol., Univ. of Sydney, SYDNEY, N.S.W., Australia
a Effects of paralysis and amniotic pressures on the skeletomuscular system of the embryo. *Gallus* spec. *(Aves)*
b Studies on teratogenic effects of antimalarial drugs. *Rattus norvegicus (Rodentia)*

SUNDARARAJ, B. I. Ph.D. — Dept. of Zool., Univ. of Delhi, DELHI-7, India

SUSSEX, I. M. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Histodifferentiation in tissue cultures. *Eucalyptus camaldulensis (Dicotyledonae)*

SUSSMAN, A. S. Ph.D., Prof. — Dept. of Botany,, Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

SUSSMAN, M. Prof. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154 U.S.A. •
a Genetic and developmental studies. *Dictyostelium* spec. *(Acrasiales)* (in collaboration with Mrs. R. B. R. SUSSMAN)

SUSSMAN, Mrs. R. B. ROTMAN Ph.D. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.
a Genetic and developmental studies. *Dictyostelium* spec. *(Acrasiales)* (in collaboration with M. SUSSMAN)

SUTTER, B. C. J. Dr.ès Sci. — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France
a Endocrine function of the foetal pancreas; insulin blood levels in the foetus and in the mother. *Rattus norvegicus (Rodentia)* (in collaboration with R. L. JACQUOT, J. M. FELIX and Mrs. M. T. SUTTER (DUB))

SUTTER (DUB), Mrs. M. T. D.E.S. — Lab. de Physiol. Anim., Fac. des Sci., B.P. 347, 51 REIMS, France
a Endocrine function of the foetal pancreas; insulin blood levels in the foetus and in the mother. *Rattus norvegicus (Rodentia)* (in collaboration with R. L. JACQUOT, J. M. FELIX and B. C. J. SUTTER)

SUZUKI, Y. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Biochemical studies of early development. *Hyalophora cecropia* and other spp. *(Lepidoptera)* (in collaboration with D. D. BROWN)

ŠVAJGER, A. M.D., D.Sc. — Inst. of Histol. and Embryol., Univ. of Zagreb, Šalata 3, P.O.B. 422, ZAGREB, Yugoslavia

a Investigation of early differentiation; transplantation, in vitro culture. *Rattus norvegicus (Rodentia)* (in collaboration with Mrs. B. LEVAK (ŠVAJGER) and N. ŠKREB, Inst. of Biol.)
b Investigation on developmental capacities of tissues of the chorioallantoic membrane. *Gallus domesticus (Aves)* (in collaboration with Mrs. B. LEVAK (ŠVAJGER) and N. ŠKREB, Inst. of Biol.)
c Investigation of chondrogenesis in the external ear. *Rattus norvegicus (Rodentia)*

SWANEPOEL, J. H. D.Sc. — Dept. of Zool., Rand Afrikaans Univ., P.O. Box 524, JOHANNESBURG, S.Africa
a Comparative embryology; ontogenetic development of the neurocranium and of the viscerocranium. *Breviceps adspersus (Anura)*
b Embryonic development. *Barbus capensis (Teleostei)*

SWANSON (EARTLY), Mrs. H. H. Ph.D. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a Effects of gonadal hormones given shortly before or after birth on sex-typical morphology, function and behaviour. *Cricetus auratus, Rattus norvegicus (Rodentia)*

SWANSON, R. F. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a Deoxyribonucleic acid synthesis during early development. *Xenopus laevis (Anura)* (in collaboration with I. DAWID)

SWARUP, K. D.Phil. — Dept. of Zool., Univ. of Gorakhpur, GORAKHPUR (U.P.), India
a Reproductive biology and endocrinology of a viviparous species with special reference to the possible role of the pituitary in the regulation of pregnancy. *(Teleostei)*
b Radiobiological and endocrinological studies on the thyroid "light cells" at various developmental stages. *(Vertebrata)*

SWIFT, H. H. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Structure and function of nucleic acids in chromosome, mitochondria and chloroplasts

SZAMBORSKI, J. J. M.D. — Lab. of Pathol. Anat., Clinic of Obstetr. and Gynecol. II, Med. School, ul. Karowa 2, WARSZAWA, Poland
a Tumours of the mesonephric derivatives in the female genital tract (uterus and ovary). *Homo sapiens (Primates)*
b Histological and histochemical features of the stroma of the uterine mucosa (normal changes due to age; metaplasia; regenerative processes; malignancy). *Homo sapiens (Primates)*

SZÉKELY, C. M.D., Prof. — Dept. of Neuropathol., Research Station of Tîrgu-Mureş of the Acad. of the S.S.R., Str. Gh. Marinescu 38, TÎRGU-MUREŞ, Rumania

SZÉKELY, G. M.D. — Anat. Dept., Med. Univ., Dischka u 5, PÉCS, Hungary •

TABAN, Ch. H. Dr.ès Sci., Dr.méd., Prof. — Dept. of Anat., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.
a Action of antisera on regeneration. *Triturus* spec. *(Urodela)*
b Tolerance of xenograft compared to homograft and related problems. *Ambystoma mexicanum* and other spp. *(Urodela)*

TAGUCHI, S. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280) Japan
a Biochemical studies on effect of radiation on the embryo. *Oryzias latipes (Teleostei), Bufo vulgaris (Anura)*

TAHARA, Y. D.Sc. — Dept. of Biol., Osaka Kyôiku Univ., Ten-noji-ku, OSAKA, 543 Japan
a Dynamic aspects of interaction between embryo and Myxovirus. *(Aves)*
b Development of sexual characters, primary and secondary. *(Echinodermata)*

TAHMISIAN, T. N. Ph.D. — Div. of Biol. and Med. Research, Argonne Natl. Lab., 9700 South Cass Ave., ARGONNE, Ill. 60439, U.S.A.
a Effects of ionizing irradiations on tissue differentiation and metabolism in embryos. *Melanoplus diff. differentialis (Orthoptera)*
b Induction and differentiation of striated muscle (electron microscopy). *Helix aspersa (Pulmonata, Gastropoda), Melanoplus diff. differentialis (Orthoptera), Branchydanio rerio, B. albolineatus (Cyprinidae, Teleostei), Gallus domesticus (Aves)*

TAKAHASHI, H. D.Sc. — Dept. of Comp. Endocrinol., Inst. of Endocrinol., Gunma Univ., Showa-machi, MAEBASHI, Japan

TAKANO, K. M.D., Prof. — Dept. of Anat., Kyoto Univ., Yoshida, Konoe-cho, Sakyo-ku, KYOTO 606, Japan
a Teratogenesis of the offspring in maternal alloxan diabetes. *Rattus norvegicus (Rodentia)*
b RNA synthesis in the fetal membranes. *Rattus norvegicus (Rodentia)*
c Epidemiological studies on anomalies in embryos. *Homo sapiens (Primates)*

TAKATA, Miss Ch. † Ph.D. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.
(deceased)

TAKATA, K. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan •

TAKAYA, H. D.Sc., Prof. — Dept. of Biol., Fac. of Sci., Kônan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan •
a Regional differentiation of the central nervous system. *Triturus* spec., *Hynobius* spec., *Bufo* spec., *Rana* spec. *(Amphibia)*
b Chemical phenocopies. *Drosophila melanogaster (Diptera)*
c Change of ultrastructure during differentiation of embryonic cells. *(Amphibia)*

TAKEDA, H. M.D., Dr.Med.Sci., Prof. — Dept. of Anat., Div. I, Kobe Univ. School of Med., Kusunoki-cho 7, Ikuta-ku, KOBE, (650) Japan
a Phylogenetic and ontogenetic studies on the cerebellum and inferior olive. *(Vertebrata)*

TAKITA, S. M.D., Ph.D., Prof. — Dept. of Surg., School of Med., Tokushima Univ., Kuramoto-cho, TOKUSHIMA-City, 770 Japan
a Functional development of the alimentary tract and of the biliary tract in the earlier stages of the fetus. *Homo sapiens (Primates)*

TAKITA, T. M.Agric. — Dept. of Aquatic Biol., Fac. of Fish., Nagasaki Univ., Bunkyo-machi 1-14, NAGASAKI, Japan

TAKOR, T. T. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria

TAMANOI, I. Ph.D. — Div. of Radiat. Hazards, Natl. Inst. of Radiol. Sci., Anagawa 4-9, CHIBA, Japan
a Modification of inducing agents of guinea pig liver by immunological technique. *Triturus pyrrhogaster (Urodela)*
b Studies on the appearance of function in embryonic heart by using micro-electrography. *Gallus domesticus (Aves)*
c Radiation effects on haematopoietic organs (immuno-chemical study). *Mus musculus (Rodentia)*

TAMARELLE (GARAUDY), Mrs. M. — Lab. de Zool. Exper., Fac. des Sci. de Bordeaux, Av. des Facultés, 33 TALENCE, France
a Développement embryonnaire. *(Collembola)*

TAMBOISE, E. Dr.en Méd., Prof. — Lab. d'Histol.-Embryol. B, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France
a Etude des troubles du développement de l'embryon sous l'action des radiations ionisantes. *Mus rattus (Rodentia)*
b Etude des altérations chromosomiques (répartition et type des lésions chromosomiques) chez l'embryon sous l'action des radiomimétiques en fonction de l'organogénèse. *Mus rattus (Rodentia)*

TANAKA, K. M.A. — Inst. of Zool., Fac. of Sci., Tokyo Kyoiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan
a Recognition of specificity in compound forms. *Botryllus primigenus, Botrylloides violaceum (Ascidia)* (in collaboration with H. WATANABE)

TANAKA, O. M.D. — Dept. of Anat., Kyoto Univ., Yoshida, Konoe-cho, Sakyo-ku, KYOTO 606, Japan
a Epidemiological studies on skeletal anomalies in embryos and early foetuses. *Homo sapiens (Primates)*
b Tests on drug teratogenicity

TANDAN, B. K. Ph.D. — Dept. of Zool., Univ. of Lucknow, LUCKNOW, India

TANIMURA, T. M.D. — Dept. of Anat., Fac. of Med., Kyoto Univ., Konoe-cho, Yoshida, Sakyo-ku, KYOTO, Japan
— Dept. of Pediat., School of Med., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.
a Effects of teratogens on embryos in vitro. *Rattus norvegicus (Rodentia)* (in collaboration with T. H. SHEPARD)

TANNER, E. A. Ph.D. — Dept. of Anim. Sci., North Carolina State Univ., P.O. Box 5127, RALEIGH, N.C. 27607, U.S.A.
a Metabolism of preimplantation embryos. *Mus musculus (Rodentia)*
b Effects of stress (high temperature) on embryonic survival. *Mus musculus (Rodentia)*

TARDENT, P. Dr.Phil., Prof. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH-8006 ZÜRICH, Switzerland •
a Regeneration and sex determination. *Hydra attenuata (Hydroidea)*
b Regeneration. *Tubularia larynx (Athecata, Hydrozoa)*
c Morphogenesis. *Podocoryne carnea (Athecata, Hydrozoa)*
d Regeneration. *Branchiura sowerbyi (Oligochaeta)*

TARDIF, B. Prof.agr. — Lab. d'Anat. Norm., 41 rue St. Girardin, 76 ROUEN, France

TARKOWSKI, A. K. Ph.D., D.Sc. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmieście 26/28, WARSAWA 64, Poland •
a Mechanisms of cell differentiation in early development. *Mus musculus (Rodentia)*
b Experimental chimerism. *Mus musculus (Rodentia)*
c Sexual differentiation and gametogenesis. *Mus musculus (Rodentia)*

TARTAR, V. Ph.D., Prof. — Dept. of Zool., Univ. of Washington Field Lab., R.1 Box 250, NAHCOTTA, Wash. 98637, U.S.A.
a Production of decorticated cells by micrurgical or chemical methods. *Stentor coeruleus (Ciliata)*

b Cytokinesis studied by micrurgy. *Stentor coeruleus (Ciliata)*
c Effects of single heat shocks. *Stentor coeruleus (Ciliata)*
d Mouthparts induction in the oral primordium. *Stentor coeruleus (Ciliata)*
e Production of cells with conflicting polarities by rotating longitudinal halves 180°. *Stentor coeruleus (Ciliata)*

TASSAVA, R. A. Ph.D. — Dept. of Zool., Coll. of Biol. Sci., Ohio State Univ., 1735 Neil Ave., COLUMBUS, Ohio 43210, U.S.A.
a Studies of the role of hormones in limb regeneration. *(Amphibia)*

TATA, J. R. Dr.ès Sci. — Natl. Inst. for Med. Research, Mill Hill, LONDON N.W.7, England
a Thyroid hormone-induced metamorphosis. *Rana catesbeiana, Xenopus laevis (Anura)*
b Effect of hormones on organ cultures. *Rana* spec. *(Anura)*
c Effect of androgens and oestrogens on the development of accessory sexual tissues. *Rattus norvegicus (Rodentia)*
d Early metamorphic competence of larvae: biochemical analysis of the acquisition of response of very early stages of larval cells (Nieuwkoop-Faber stages 38-41) to thyroid hormones that resembles spontaneous metamorphic response at later stages. *Xenopus laevis (Anura)*
e Anti-metamorphic effect of prolactin: effect of ovine prolactin in preventing developmental changes induced by thyroid hormones studied at the level of nucleic acid synthesis in target tissues (liver, tail, skin). *Rana catesbeiana (Anura), Diemictylus viridescens (Urodela)*

TAVERNE, M. — Zool. Lab., Univ. of Amsterdam, Plantage Doklaan 44, AMSTERDAM, Netherlands
a Umbilical sphincter. *Oryctolagus cuniculus (Lagomorpha)*

TAYLOR, A. C. Ph.D., Prof. — Dept. of Anat., The Univ. of Texas Dental Branch, HOUSTON, Tex. 77025, U.S.A.

TAYLOR, Miss E. L. B.A. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol.-Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a Maintenance of differentiation in cultured heart cells. *Gallus domesticus (Aves)*

TAYLOR, Miss J. M. Dr. — Lab. of Cell. Biol., Dept. of Biol. Sci., Wellesley Coll., WELLESLEY, Mass. 02181, U.S.A.
a Postnatal differentiation of three fiber types in skeletal muscle (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss G. F. GAUTHIER, and Miss H. A. PADYKULA)
b Differentiation of neuromuscular junctions in skeletal muscle (electron microscopy and histochemistry). *Rattus norvegicus (Rodentia)* (in collaboration with Miss G. F. GAUTHIER and Miss H. A. PADYKULA)
c Ovarian-uterine-placental relationship (electron microscopy and histochemistry). *Didelphys virginiana (Marsupialia)* (in collaboration with Miss G. F. GAUTHIER and Miss H. A. PADYKULA)
d Lipid transport by the yolk sac placenta (electron microscopy and histochemistry. *Rattus norvegicus (Rodentia)* (in collaboration with Miss G. F. GAUTHIER and Miss H. A. PADYKULA)

TAYLOR, L. W. Ph.D., Prof. (Emer.) — Dept. of Poultry Husbandry, Fac. of Agric., Univ. of California, BERKELEY, Calif. 94720, U.S.A.
a Lethal genes: inheritance, interrelationships and effects of selection. *Gallus gallus (Aves)*
b O_2 and CO_2 requirements and tolerances in development. *Gallus gallus (Aves)*

TCHELEBI (PAPILLON), Mrs. M. — Lab. d'Evolution des Etres Organisés, Fac. des Sci., 105 Bd. Raspail, PARIS VIe, France
a Influence of physical factors upon egg development. *Schistocerca gregaria (Acrididae, Orthoptera)*

TCHERNIAEV, G. Cand.Sci.Biol. — Inst. Limnol. de l'Acad. des Sci. de l'URSS, LISTVENITCHNOÏE sur Baïkal, region d'Irkoutsk, U.S.S.R.
a Développement de l'omoul du Baïkal. *Coregonus autumnalis migratorius (Teleostei)*
b Développement des cottidés du Baïkal. *Comephorus baikalensis, C. dybowski (Cottidae, Teleostei)*

TEITELMAN (de PINCZUK), Mrs. G. N. Lic. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a Protein synthesis in normal and lobeless embryos analyzed by disc electrophoresis. *Ilyanassa obsoleta (Gastropoda)*

TELEPNEVA, Miss S. A. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

TEMIN, H. M. Ph.D., Prof. — McArdle Lab. for Cancer Research, Univ. of Wisconsin, 450 N. Randall Ave., MADISON, Wis. 53706, U.S.A.
a Changes in fibroblasts induced by oncogenic viruses (Rous sarcoma virus). *Gallus domesticus (Aves)*

TEMPEL, K. Dr.med.vet. — Inst. für Pharmakol., Toxicol. und Pharmazie der Tierärztl. Fak. der Univ. München, Veterinärstr. 13, MÜNCHEN 22, W.Germany
a Investigations on functions of DNAses in embryonic tissues. *Gallus domesticus (Aves)*
b Effect of ionizing radiations and biological alkylating agents on embryonic DNA and DNAses. *Gallus domesticus (Aves)*
c Infuence of nuclease inhibitors (polyanions) on nucleic acid metabolism in the embryo. *Gallus domesticus (Aves)*
d Phosphatases and lysosomes in embryonic tissues; behaviour during development and under the influence of ionizing radiation and biological alkylating agents. *Gallus domesticus (Aves)*

TEMPLE, D. — Lab. d'Histol., Fac. de Méd., 2 rue Ecole de Médicine, 34 MONTPELLIER, France
a Oviform development of primary spermatogonia. *Triturus* spec. *(Urodela)*
b Electron microscopic studies on Bidder's organ. *Bufo* spec. *(Anura)*

TENCER, Miss R. Dr.en Sci. — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium
a Metabolism during development. *Paracentrotus* spec., *Arbacia* spec. *(Echinoidea), Ambystoma* spec., *Pleurodeles* spec. *(Urodela), Bufo* spec., *Rana* spec. *(Anura)*

TEPLITZ, Miss N. A. Cand.biol.sci. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.
a Restoration of regeneration capacity of limbs after X-irradiation (biochemical study). *Ambystoma mexicanum (Urodela)* (in collaboration with L. V. POLEZHAEV and Mrs. S. J. TUCHKOVA)

TERAYAMA, H. Ph.D., Prof. — Zool. Inst., Univ. of Tokyo, Hongo 7-3, Bunkyo-ku, TOKYO, (113) Japan
a Studies on composition and biochemical activities of germ cell nuclei and early changes after fertilization. *Pseudocentrotus depressus (Echinoidea)*
b Mechanism of homeostatic growth regulation in liver regeneration. *Rattus norvegicus (Rodentia)*

TESTA-BAPPENHEIM, I. Dr.med.A.O., Prof. — Ist. di Antropol. Criminol. dell'Univ., C.so G. Galilei, Nr. 22, TORINO, Italy
a Experimental embryology. *Triton alpestris, T. taeniatus (Urodela)*
b Developmental genetics. *Homo sapiens (Primates)*
c Developmental pathology. *Homo sapiens (Primates)*

TEUCHERT, Mrs. G. Dr.rer.nat. — Inst. für Flugmedizin der DFVLR, Kölnerstr. 70, 532 BAD GODESBERG, W.Germany
a Embryology. *(Bdelloidea, Rotatoria)*
b The influence of simulated weightlessness by rotation on the early development (polarization). *Ascaris (Nematoda), (Anura)* (in collaboration with W. BRIEGLEB)
c The influence of simulated weightlessness (by submersion) on metamorphosis. *(Anura)* (in collaboration with W. BRIEGLEB)

TEULADE, P. Dr.ès Sci. — Sect. de Biol. Gén. et Appl., Univ. de Lyon, 43 Bd. du 11 Novembre 1918, 69 VILLEURBANNE, France
a Action des rayonnements sur le développement embryonnaire. *Bombyx mori (Lepidoptera)*

THEILER, K. Dr., Prof. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH Switzerland land

THEISE, H. Dipl.Chem. — Inst. für Zellphysiol., Deutsche Akad. der Wissensch. zu Berlin, Lindenberger Weg 70, 1115 BERLIN-Buch, East.Germany

THESINGH, Miss C. W. M.D. — Lab. for Cell Biol. and Histol., Fac. of Med., State Univ., Rijnsburgerweg 10, LEIDEN, Netherlands
a Hormones and thyroid development. *Gallus domesticus (Aves)*

THEVENET, Miss A. Dr. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France

THIEBOLD, J. J. Dr.ès Sci., Prof. — Inst. de Zool. et d'Embryol. Exper., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, 67 STRASBOURG, France
a Sexual differentiation. *(Anamnia)*
b Hypophyso-thyroidal relations in the embryo. *Gallus domesticus (Aves)*

THIERY, M. M.D., Ph.D., Prof. — Dept. of Obstet. and Gynecol., Fac. of Med., Univ. of Ghent, Aan de Bocht 6, GHENT, Belgium
a Intra-uterine hypoxia (determination of blood lactate/pyruvate balance and acid/base balance). *Homo sapiens (Primates)*
b Longitudinal study of twins and correlation with genotype as determined by placental membrane morphology, placental zymograms and extensive bloodtyping. *Homo sapiens (Primates)*
c Histochemistry of fallopian tube. *Homo sapiens (Primates)*
d Histochemistry of placenta. *Homo sapiens (Primates)*
e Enzyme histochemistry of female genital tract. *(Mammalia)*

THILLARD, Miss M. J. Lic., Ing.Chim. — Lab. d'Anat. Comp., Fac. des Sci. d'Orsay, Bâtiment 441, 91 ORSAY, France
a Enzymatic histochemistry of pineal gland. *Gallus domesticus (Aves)*

THOMAS, D. B. B.Sc. — Dept. of Anat., Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a The development of the lympho-myeloid complex. *(Mammalia)*
b The transplantation of foetal lympho-myeloid cells. *(Mammalia)*
c The effects of irradiation on the developing lympho-myeloid tissues. *(Mammalia)*

THOMAS, R. G. Ph.D., Prof. — Dept. of Botany, Massey Univ. of Manawatu, PALMERSTON NORTH, New Zealand

THOMAS, R. J. Ph.D. — Dept. of Anat., School of Med., Creighton Univ., OMAHA, Neb. 68131, U.S.A.
a Epiboly and cell differentiation (transmission and scanning electron microscopy and light optical techniques). *Brachydanio rerio (Teleostei)*

THOMMES, R. C. Ph.D., Prof. — Dept. of Biol. Sci., De Paul Univ., 1036 Belden Ave., CHICAGO, Ill. 60614, U.S.A.
a Hypophysectomy effects upon "adrenal dependent" phenomena. *Gallus domesticus (Aves)*
b Hormonal control of water balance. *Gallus domesticus (Aves)*
c Hormonal control of yolk sac membrane metabolism. *Gallus domesticus (Aves)*

THOMPSON, J. N. Ph.D. — Dept. of Poultry Sci., New York State Coll. of Agric. at Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

THOMPSON, Mrs. J. T. M.Sc. — Biochem. Dept., Med. School, Dalhousie Univ., Sir Charles Tupper Building, HALIFAX, N.S., Canada
a Regulation of synthesis of hemoglobin and blood proteins in the embryo by transfer RNA. *Gallus gallus (Aves)*

THOMPSON, R. P. Ph.D., Prof. — Dept. of Biol. Sci., State Univ. Coll. at Brockport, BROCKPORT, N.Y. 14420, U.S.A.
a A study of the inhibitory effects of tissue extracts on homologous organ development (particularly the effect of whole eye extracts and extracts of eye components on the development of the lens in vitro). *Gallus domesticus (Aves)*

THOMPSON, T. E. Ph.D., D.Sc. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England

THORNTON, C. S. Ph.D., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.
a Influence on regeneration of ingrowth of brachial nerves into aneurogenic fore limbs grafted orthotopically to normal hosts. *Ambystoma maculatum (Urodela)*
b Recuperation of regeneration in nerve-dependent, formerly aneurogenic limbs after prolonged denervation. *Ambystoma maculatum (Urodela)*
c An immunobiological analysis of nerve influence in regeneration. *Ambystoma* spec.
d An analysis of endocrine influence on regeneration. *Ambystoma* spec., *Notophthalmus viridescens (Urodela), Xenopus* spec. *(Anura)*

THURMOND, W. Ph.D., Prof. — Biol. Sci. Dept., Calif. State Polytechnic Coll., SAN LUIS OBISPO, Calif. 93401, U.S.A.
a Onset of melanophore-stimulating activity by the pars distalis and pars intermedia. *Ambystoma tigrinum, Hyla regilla (Amphibia)*
b Development of ACTH production in the adenohypophysis. *(Amphibia)*

TIBA, T. Dr.Vet.Med. — Dept. of Vet. Obstet., Fac. of Vet. Med., Hokkaido Univ., N 18, W 9, SAPPORO, (060) Japan
a Kinetics of spermatogenesis, especially with regard to the establishment of the wave pattern of the seminiferous epithelium. *Mustela vison (Carnivora)*
b Histological investigations on the diurnal cycles of spermatogenesis. 1. Spermiation. 2. Meiotic activity. *Mus musculus (Rodentia)*

TIBBITTS, F. D. Ph.D., Prof. — Dept. of Biol., Univ. of Nevada, RENO, Nevada 89507, U.S.A.
a A study of placentation, specifically the histochemistry and ultrastructure of the placenta throughout development. *(Rodentia)*

TIBERI (MARQUIS), Mrs. J. Lic.ès Sci. — Lab. d'Anat. et d'Histol. Comp., 7 quai St. Bernard, 75 PARIS Ve, France

TICKLE, Miss C. A. B.A. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a Cellular interactions using radioactively labelled cells. *Gallus gallus (Aves)*

TIEDEMANN, H. Dr.med., Dr.rer.nat., Prof. — Inst. für Physiol. Chemie, Med. Fak., Freie Univ. Berlin, Arnimallee 22, 1 BERLIN 33, W.Germany
a Morphogenetic factors, characterization and mechanism of action. *(Vertebrata)* (in collaboration with Mrs. H. TIEDEMANN (WAECHTER))
b RNA and protein metabolism in development. *(Amphibia)*

TIEDEMANN (WAECHTER), Mrs. H. Dr.rer.nat. — Inst. für Physiol. Chemie, Med. Fak., Freie Univ. Berlin, Arnimallee 22, 1 BERLIN 33, W.Germany
a Morphogenetic factors, characterization and mechanism of action. *(Vertebrata)* (in collaboration with H. TIEDEMANN)

TIMASHKEVICH, Mrs. T. B. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of theU.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

a Regeneration and cell division in the stomach. *Rattus norvegicus, Mus musculus (Rodentia)*

TIMMERMANS, Miss L. P. M. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a Cytochemistry and physiology of shell secretion. *Limnaea stagnalis, Pomacea bridgesi diffusa (Gastropoda)*

b Germinal localization in eggs. *Dentalium* spec. *(Scaphopoda)*

TITOVA, Mrs. I. I. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

TOERIEN, M. J. Ph.D. — Dept. of Anat., Univ. of Stellenbosch, STELLENBOSCH, S. Africa

a Cranial development. *Podiceps cristatus (Podicipitidae, Aves)*

b Morphological and experimental studies on cranial morphogenesis (by means of extirpation procedures, heteroplastic and orthotopic transplants, the contributions and interrelationship of the visceral, axial and capsular skeleton are studied). *Ambystoma* spec., *Triturus* spec. *(Urodela), Xenopus* spec. *(Anura), Chelydra serpentina (Chelonia), Anas boschas, Spheniscus demersus, Gallus domesticus (Aves), Oryctolagus cuniculus (Lagomorpha)*

TOIT, C. A. du Ph.D., Prof. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, S.Africa •

TOIVONEN, S. I. Ph.D., M.D., Prof. — Lab. of Exper. Embryol., Dept. of Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI 10, Finland •

a The specific action of heterogeneous inductors. *Triturus* spec. *(Urodela)*

b The mechanism of primary induction. *Triturus* spec. *(Urodela)* (in collaboration with L. O. SAXÉN, Dept. of Pathol.)

c Nucleic acid synthesis in induced ectoderm. *Triturus* spec. *(Urodela)* (in collaboration with P. J. KOHONEN)

d Cell interaction. *Triturus* spec. *(Urodela)*

TOKIN, B. P. Dr.Biol.Sci., Prof. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD B-164, U.S.S.R.

a Regeneration, asexual reproduction and somatic embryogenesis. *Beroe cucumis, Bolinopsis infundibulum (Ctenophora), Pelmatohydra oligactis, Laomedea flexuosa* and other spp. *(Coelenterata)*

b Ontogenesis. *(Protozoa)*

c Regeneration during ontogenesis. *(Protozoa)*

TOKUNAGA, Miss C. Ph.D. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A.

a Developmental genetics of pattern formation. *Drosophila melanogaster (Diptera)*

b Pleiotropic effect of genes. *Drosophila melanogaster (Diptera)*

TOMITA, H. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

TOMODA, Y. D.Sc. — Div. of Zool., Natl. Sci. Museum, Ueno Park, Daito-ku, TOKYO, Japan

TÖNDURY, G. Dr., Prof. — Anat. Inst. der Univ., Gloriastr., 19, 8006 ZÜRICH, Switzerland •

TONEBY, M. I. Fil.kand. — The Wenner-Gren Inst., Norrtullsgatan 16, S-113 45 STOCKHOLM, Sweden

a Metabolism of tryptophane. *(Echinodermata)*

TONGE, C. H. D.D.Sc., Prof. — Dept. of Oral Anat., The Dental School, Univ. of Newcastle upon Tyne, Northumberland Rd., NEWCASTLE upon Tyne NE1 8TA, England

a Tooth development and eruption

b Effect of severe undernutrition on the development and growth of teeth and jaws (including rehabilitation). *Sus scrofa (Artiodactyla)*

c Protein calory deficiency and rehabilitation relative to the development and growth of teeth and jaws. *Sus scrofa (Artiodactyla)*

TONNEYCK (MÜLLER), Mrs. I. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands

a Experimental studies on the morphogenesis of the skull. *Gallus domesticus (Aves)*

TÖRÖ, I. M.D., Prof. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary

a Experimental and physiological embryology; teratogenesis. *Pleurodeles waltlii, Ambystoma mexicanum (Urodela), Gallus domesticus, (Aves), Rattus rattus (Rodentia)*

TÖRÖ, I., Jr. M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary

a Developmental pathology and teratogenesis (electron microscopy). *Rattus rattus (Rodentia)*

TÖRÖK, L. J. Ph.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary

a Regeneration and somatic embryogenesis with special reference to the morphogenetic role of the nervous system. *Dugesia (= Euplanaria) lugubris (Turbellaria)*

b Regeneration, teratogenesis and tumour development. *Dugesia (= Euplanaria) tigrina (Turbellaria)*
c Nucleo-histone changes during morphogenetic processes of regeneration. *Dugesia (= Euplanaria) lugubris (Turbellaria)*
d Nucleo-histone changes during embryonic development and regeneration. *Triturus cristatus (Urodela), Xenopus laevis (Anura)*

TORRÈS (WINTENBERGER), Mrs. S. Dr.ès Sci.Nat. — Station Centr. de Physiol. Anim., Inst. Natl. de la Rech. Agronom., C.N.R.Z., 78 JOUY-en-JOSAS, France
a Etude de la mortalité embryonnaire précoce; étude de l'évolution des oeufs aux premiers stades, dans les conditions normales et avec variation de l'équilibre endocrinien de la mère. *Ovis aries (Artiodactyla)*
b Etude de la mortalité embryonnaire. *Sus scrofa (Artiodactyla)*
c Fertilization and development of superovulated eggs. *Ovis aries (Artiodactyla)*
d Activité respiratoire des oeufs en liaison avec la mortalité embryonnaire. *Ovis aries (Artiodactyla)*
e Etude de l'activité respiratoire des blastocystes âgés de 5 jours. *Oryctolagus cuniculus (Lagomorpha)*

TOTO, P. D. D.D.S., Prof. — Dept. of Oral Pathol., School of Dent., Loyola Univ., 1757 W.Harrison St., CHICAGO, Ill. 60612, U.S.A.
a Cytogenesis of myoblasts and myotubules in regenerating striated muscle (tracer studies). *Rattus norvegicus (Rodentia)*
b Cytogenesis of plasma cells in subcutaneous tissues (tracer studies). *Mus musculus (Rodentia)*

TOWERS, B. M.B., Ch.B. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB_2 3DY, England
a Development of fetal lung and changes at birth (experimental). *Rattus rattus (Rodentia), Ovis aries (Artiodactyla)*
b Structure and functions of fetal larynx (experimental). *Rattus rattus (Rodentia), Ovis aries (Artiodactyla)*

TRAMPUSCH, H. A. L. Ph.D. — Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Mechanics of the morphogenetic field during regeneration. *Ambystoma mexicanum (Urodela)*
b Compatibility of xenoplastic blastemata, used for the study of regeneration. *(Anura, Urodela)*
c Regeneration from extremities, situated in heterotopic positions. *Xenopus laevis (Anura)*
d Differentiation and de-differentiation during regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with Mrs. A. E. HARREBOMÉE)
e Effect of X-rays on oogenesis and ovulation. *Mus* spec. *(Rodentia)* (in collaboration with P. SMIT)
f Analysis of fracture-repair. *Ambystoma mexicanum (Urodela)* (in collaboration with H. J. PRINS)
g Tracer studies in the course of regeneration. *Ambystoma mexicanum (Urodela)*

TRASLER, Mrs. D. G. Ph.D. — Human Genet. Section, Dept. of Genet., McGill Univ., MONTREAL, Que., Canada

TRAURIG, H. — Depts. of Microbiol. and Biochem., Med. Center, Univ. of Kentucky, LEXINGTON, Ky. 40506, U.S.A.
a Analysis of the physico-chemical properties of DNA in differentiating cells. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus musculus, Rattus rattus (Rodentia), Homo sapiens (Primates)* (in collaboration with S. P. MODAK)

TRELSTAD, R. L. M.D. — Developm. Biol. Lab., Massachusetts Gen. Hosp., BOSTON, Mass. 02114, U.S.A.
a The ultrastructure of cell contacts during early stages of development. *Gallus domesticus (Aves)*
b The analysis of mesenchymal tissue organization through evaluation of individual cartilage cell orientation in the axial and limb skeleton. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
c Changes in the intracellular position of the Golgi apparatus during epithelial-mesenchymal interactions in the corneal epithelium and limb bud ectoderm. *Gallus domesticus, Anas platyrhynchos, Phasianus colchicus (Aves), Mus musculus (Rodentia)*
d Development of the fibrous architecture of the orthogonal collagen lamellae in the corneal stroma. *Gallus domesticus (Aves)*

TRINKAUS, J. P. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Cell contacts, cell movements and mechanisms of morphogenetic movements with techniques of cell culture, cinemicrography, electron microscopy, cell dissociation and reaggregation, electrophysiology and chemistry of the cell surface, and microsurgery. *Fundulus heteroclitus (Teleostei), Xenopus laevis (Anura), Gallus domesticus (Aves)*

b Differentiation of clones of connective tissue cells with techniques of cloning in cell culture, chemistry of collagen, elastin and mucopolysaccharides, cinemicrography of clonal behavior. *Gallus domesticus (Aves)*

TRIONE, E. J. Dr. — Dept. of Bot. and Plant Pathol., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.

a Biochemical mechanism of flowering. *(Angiospermae)*

b Biochemical mechanism of light-induced sporulation. *(Fungi)*

TRIPLETT, E. L. Ph.D., Prof. — Dept. of Biol. Sci., Univ. of California, SANTA BARBARA, Calif. 93106, U.S.A.

TRUMAN, D. E. S. Ph.D. — M.R.C. Epigenet. Research Group, Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH, EH9 3JN, Scotland, U.K.

a Immunochemical studies of lens development. *Xenopus laevis (Anura), Gallus domesticus (Aves)* (in collaboration with J. C. CAMPBELL and Mrs. R. M. CLAYTON)

b Antigenic studies of lens regeneration. *Xenopus laevis (Anura)* (in collaboration with J. C. CAMPBELL)

TRUSLOVE, Miss G. M. Ph.D. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C.1, England

TSAFRIRI, A. M.Sc. — Dept. of Zool., Tel-Aviv Univ., 155 Herzl St., TEL-AVIV, Israel

a Nucleic acid metabolism of ovum. *Rattus norvegicus (Rodentia)*

TSCHUMI, P. A. Dr., Prof. — Div. of Exper. Embryol., Zool. Inst., Univ. Bern, Sahlistr. 8, 3000 BERN, Switzerland

a Ectoderm-mesoderm relationship during early limb development. *Xenopus laevis (Anura)*

b Limb regeneration in metamorphosed animals. *Xenopus laevis (Anura)*

TSUKAHARA, J. M.Sc. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, (517) Japan

a Electron microscopical and biochemical studies of oogenesis. *Hemicentrotus pulcherrimus, Mespilia globulus (Echinoidea)*

TUCHKOVA, Mrs. S. J. — Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Restoration of regeneration capacity of limbs after X-irradiation. *Ambystoma mexicanum (Urodela)* (in collaboration with L. V. POLEZHAEV and Miss N. A. TEPLITZ)

TUCHMANN-DUPLESSIS, H. Prof. — Lab. d'Histol.-Embryol. A, Fac. de Méd., 45 rue des Sts. Pères, PARIS VIe, France •

a Anencéphalie. *Homo sapiens (Primates)*

b Tératogenèse par sulfamides hypoglycémiants, antimetabolites. *Rattus* spec. *(Rodentia)* (en collaboration avec Mrs. L. MERCIER (PAROT))

c Influence des hormones sur le développement foetal. *Rattus* spec. *(Rodentia)*

d Influence des alcaloides du Rauwolfia, de la réserpine et de la déserpidine, sur le développement. *Rattus* spec. *(Rodentia)* (en collaboration avec Mrs. L. MERCIER (PAROT))

e Influence des neuroleptiques sur la fertilité et le développement foetal. *Rattus* spec., *Mus* spec. *(Rodentia), Oryctolagus cuniculus (Lagomorpha)*

f Diabète expérimental et grossesse. *(Mammalia)*

g Influence des antimitotiques sur la gestation. *(Rodentia)* (en collaboration avec Mrs. L. MERCIER (PAROT))

TUCKER, J. S. Ph.D. — Pacif. Marine Station, Univ. of the Pacific, DILLON BEACH, Calif. 94929, U.S.A.

a Gametogenesis and spawning by gross observation, histological and histochemical methods. *Chone mollis, Cirriformia spirabrancha, Hemipodus borealis, Nephtys caecoides, Axiothella rubrocincta (Polychaeta), Phoronopsis viridis (Phoronida), Macoma secta, M. nasuto (Mollusca)*

TUFT, P. H. Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Rd., EDINBURGH 9, Scotland, U.K. •

a Embryonic growth: cell number, mass, density, uptake and distribution of water. *Xenopus laevis (Anura)*

b Effect of morphogenetic inhibitors, e.g. β-mercapto-ethanol

c Water relations in haploid embryos

d The uptake of water by the blastocyst. *(Mammalia)*

e The distribution of water in the implanted foetus. *(Mammalia)*

TUMANISHVILI, G. D. Dr. — Dept. of Biophysics, Inst. of Exper. Morphol., Acad. of Sci. of the Georgian S.S.R., 51 St. Kamo, TBILISSI 2, U.S.S.R.

a Participation of nuclear and cytoplasmic chemical factors in regulation of DNA synthesis studied in isolated nuclei. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

b Role of chemical intercellular interactions in regulation of the rate of cell multiplication and intercellular synthesis studied in cell cultures. *(Vertebrata)*

TUNG, T. C. Dr., Prof. — Inst. of Zool., Acad. Sinica, PEKING, Haitien, People's Republ. of China •

TURCHINI, J. P. D.M., D.Sc., Prof. — Lab. d'Histol.-Embryol., Fac. de Méd., Bd. Winston Churchill, B.P. 38, 63 CLERMONT-FERRAND, France

a Cytology of neonatal liver; differentiation of intercellular junctions, characters of microbodies; histochemical differentiation. *Mus musculus (Rodentia)* (in collaboration with R. POURHADI and P. MALET)

TWEEDELL, K. S. Ph.D., Prof. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind. 46556, U.S.A.

a Oocyte development and incorporation of radioactive precursors. *Pectinaria gouldii (Polychaeta)*

b Inhibition of hydranth regeneration. *Tubularia crocea (Hydroidea)*

c Renal tumor induction by subcellular fractions in embryonic and larval stages. *Rana pipiens (Anura)*

TYLER, A. † Ph.D., Prof. — Dept. of Developm. Biol., Div. of Biol., Calif. Inst. of Technol., PASADENA, Calif. 91109, U.S.A.
(deceased)

TYLER, C. Ph.D., D.Sc., Prof. — Dept. of Physiol. and Biochem., The Univ., READING RG1 5AQ, England

a Structure and properties of the egg shell. *(Aves)*

TYNDALE-BISCOE, C. H. Ph.D. — Dept. of Zool., School of Gen. Studies, Australian Nat. Univ., P.O. Box 4, CANBERRA, A.C.T. 2600, Australia

a Early development, including fine structure. *Antechinus stuarti (Marsupialia)*

b Fine structure of the blastocyst. *Macropus eugenii (Marsupialia), Oryctolagus cuniculus (Lagomorpha)*

c Factors involved in resumption of development by blastocysts in diapause. *Macropus eugenii (Marsupialia)*

TYSZKIEWICZ, Mrs. K. M.Sc. — Zool. Dept., Jagiellonian Univ., ul.Krupnicza 50, KRAKÓW, Poland

a Embryogenesis of nervous system. *Tetrodontophora bielanensis (Collembola)*

UBBELS, Miss G. A. Ph.D. — Hubrecht Lab. (Internat. Embryol. Inst.), Uppsalalaan 1, Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a Origin and significance of cytochemical heterogeneity of cell populations in the developing egg. *Ambystoma mexicanum (Urodela), Xenopus laevis (Anura)*

b Histochemical and autoradiographical analysis of neural and mesodermal competence in the blastula/gastrula stage. *Ambystoma mexicanum (Urodela)* (in collaboration with P. D. NIEUWKOOP and P. Th. M. v. d. SAAG)

c Cytochemical analysis of oogenesis and early development. *Gryllus domesticus, Locusta migratoria (Orthoptera)*

UCHIDA, T. A. Dr.Agr. — Zool. Lab., Fac. of Agric., Kyushu Univ., FUKUOKA, Japan

a Studies on reproduction and embryology. *Pipistrellus abramus, Miniopterus schreibersi (Chiroptera)*

UEMURA, I. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO, 158 Japan

a Electron microscopic studies on the development of primary mesenchyme cells. *Hemicentrotus pulcherrimus (Echinoidea)*

UHER, J. M.D., C.Sc. — Clin. of Obstet. and Gynecol., Postgrad. School of Med., nábr. K. Marxe 157, PRAHA-Podoli, Czechoslovakia

ULBERG, L. C. Ph.D., Prof. — Dept. of Anim. Sci., North Carolina State Univ., P.O. Box 5127, RALEIGH, N.C. 27607, U.S.A.

a Growth in vitro of very young embryos. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha), Ovis aries, Sus scrufa (Artiodactyla)*

b Influence of stress (high temperature) on subsequent young embryo development. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha), Ovis aries, Sus scrofa (Artiodactyla)*

c Altered viability of sperm as a cause for delayed embryo death. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha), Ovis aries, Sus scrofa (Artiodactyla)*

ULLMANN, Miss S. L. Ph.D. — Dept. of Zool., The Univ., GLASGOW W.2, Scotland, U.K.

a Autoradiography of ovarioles. *Tenebrio molitor (Coleoptera)*

b Oogenesis in vitro. *Tenebrio molitor (Coleoptera)*

ULRICH, E. Dipl.Phil.II. — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, 8006 ZÜRICH, Switzerland

a Cell heredity and determination in male and female genital discs (methods: transplantation and somatic crossing over). *Drosophila melanogaster (Diptera)*

ULRICH, H. Dr.phil., Prof. — Dept. of Zool., Swiss Fed. Inst. of Technol., Universitätstr. 2, 8006 ZÜRICH, Switzerland

a Action of X-rays on nucleus and cytoplasm of eggs and on embryonic stages. *Drosophila melanogaster (Diptera)*

b Morphology, physiology and cytology of paedogenetic-bisexual reproduction cycle. *Heteropeza pygmaea (= Oligarces paradoxus), Miastor metraloas (Itonididae = Cecidomyiidae, Diptera)*

UPPULURI, V. R. R. Dr. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A.

a Temporal and spatial patterns of cell replication and nuclear degeneration during lens development and growth; computer analysis of mathematical models. *Gallus domesticus (Aves)* (in collaboration with S. P. MODAK)

URBAN, P. Ph.D. — Dept. of Biol. Sci., Union College, SCHENECTADY, N.Y. 12308, U.S.A.

a Fine structure of gametogenesis, fertilization and early development. *Bryopsis hypnoides (Chlorophyceae)*

URBANI, E. Prof. — Ist. di Istol. ed Embriol., Univ. di Roma, Fac. di Sci., Citta Universitaria, 00185 ROMA, Italy •

a Cytochemical and autoradiographic investigations on oogenesis. *Dytiscus marginalis (Coleoptera)*

URBANI (MISTRUZZI), Mrs. L. Prof.Inc. — Ist. di Istol. ed Embriol., Fac. di Sci., Univ. di Roma, Citta Universitaria, 00185 ROMA, Italy

URSPRUNG, H. Ph.D., Prof. — Lab. for Developm. Biol., Swiss Federal Inst. of Technol., Sonneggstr., ZÜRICH, Switzerland •

a Biochemical studies on differentiation. *Drosophila melanogaster (Diptera), Rana pipiens, Xenopus laevis (Anura), Mus musculus (Rodentia), Gallus domesticus (Aves)*

b Organization of imaginal discs. *Drosophila melanogaster (Diptera)*

c Ultrastructure and enzymology of fertilization. *Ascidia nigra (Tunicata)*

UYSAL, M. M.D. — Inst. of Histol. and Embryol., Med. Fac., Hacettepe Sci. Center, ANKARA, Turkey

a Collagenogenesis in the umbilical cord. *Homo sapiens (Primates)*

VAAGE, S. M.D. — Anat. Inst., Univ. of Oslo, Karl Johansgatan 47, OSLO, Norway

VACEK, Z. MUDr., D.Sc., Prof. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia

a Electron microscopy and histochemistry of the placenta (comparative studies on the submicroscopic structure, enzyme histochemistry and transport mechanism). *Homo sapiens (Primates), (Rodentia; Carnivora; Insectivora; Chiroptera)*

b Role of primitive streak and tail region in early differentiation of the body (submicroscopic and cytochemical studies in normal and experimental conditions). *Rana esculenta (Anura), Gallus domesticus (Aves), Mus rattus (Rodentia)*

VAHS, W. Dr.phil., Prof. — Zool. Inst. der Univ., Weyertal 119, 5 KÖLN-Lindenthal, W. Germany

a Quantitative cytochemistry of nucleic acids and proteins during induction and differentiation. *(Teleostei; Urodela; Aves)*

b Phase specific gene activities in the different germ layers and in the eyecup-lens-system of the developing embryo, as revealed by quantitative cytochemical DNA determinations. *Salmo irideus (Teleostei), (Urodela)*

c Biochemistry of early development including yolk utilization. *(Teleostei; Amphibia)*

VAKAET, L. C. A. M.D., Prof. — Lab. of Anat. and Embryol., State Univ. Center, Groenenborgerlaan 171, ANTWERPEN, Belgium •

a Early development. *Gallus domesticus (Aves)*

b Fetal and neonatal endocrinology. *Mus musculus albinus (Rodentia)*

VALDEZ de MORENO, Mrs. C. L. — Inst. de Biol., Univ. Nac. de Tucumán, Chacabuco 460, S. M. de TUCUMÁN, Argentina

a Respiration studies on spermatozoa. *Bufo arenarum (Anura)*

VANABLE, J. W., Jr. Ph.D. — Dept. of Biol. Sci., Purdue Univ., LAFAYETTE, Ind. 47907, U.S.A.
temporarily: Dept. of Biol., Yale Univ., Kline Biol. Tower, NEW HAVEN, Conn. 06520, U.S.A.

a Thyroxin control of skin gland development: the origin of the gland rudiments; the control of the decision to produce mucous or granular secretion. *Xenopus laevis (Anura)*

VAN ALTEN, P. J. Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO, Ill. 60612, U.S.A.

a Ontogeny of the immunological mechanism. *Gallus domesticus (Aves)*

b Development of lymphocyte competence to respond to mitogens in vitro. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

VANDEBROEK, G. D.Sc., Prof. — Lab. d'Embryol., Inst. de Zool., Univ. de Louvain, 59 rue de Namur, LOUVAIN, Belgium •

VANDERHAEGHE (HOUGARDY), Mrs. F. Dr.en Sci. — address unknown

VAN DETH, J. H. M. G. M.D. — Dept. of Anat. and Histol., Univ. of Adelaide, ADELAIDE, S.Australia 5000, Australia

a Teratogenesis by hormones. *Gallus domesticus (Aves), Rattus norvegicus (Rodentia)*

b Hormonal influences on sex determination. *Gallus domesticus (Aves)*

VAN GANSEN (RASMONT), Mrs. P. Agrégé — Lab. de Morphol. Anim., Univ. libre de Bruxelles, 67, rue des Chevaux, RHODE-ST-GENÈSE, Brabant, Belgium

a Descriptive and experimental morphology of nucleoli, ribosomes and glycogen during maturation, fertilization, segmentation and early gastrulation (electron microscope studies). *Xenopus laevis (Anura)*

VAN HORN (NEUMANN), Mrs. S. A. Ph.D., Prof. — Dept. of Zool.-Entomol., Montana State Univ., BOZEMAN, Montana 59715, U.S.A.

a Maternal environmental inter-relationships with embryonic developmental rate. *Aulocara elliotti (Orthoptera)*

b Embryonic neuroendocrine functions. *Aulocara elliotti (Orthoptera)*

VANNINI, E. Dr., Prof. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy

a Experimental analysis of the development of the gonad and Bidder's organ. *Bufo* spec. *(Anura)*

b Inhibition by antibiotics of testosterone-induced sex-reversal in tadpoles. *Rana dalmatina (Anura)*

c General study of the problem of the "sex gradient" in various hermaphrodite animals. *(Hydroidea; Tricladidea, Turbellaria; Serpulidae, Polychaeta)*

VAN STONE, J. M. Ph.D., Prof. — Dept. of Biol., Trinity Coll., HARTFORD, Conn. 06106, U.S.A.

a The influence of thyroxine upon the regenerative capacity of the tadpole hindlimb. *Rana sylvatica (Anura)*

VAN VALEN, Mrs. Ph. — Dept. of Biol. Sci., Univ. of Illinois at Chicago Circle, Box 4348, CHICAGO, Ill. 60680, U.S.A.

VANZULLI, Mrs. A. B.Sc. — Sect. of Exper. Neurol., Inst. of Neurol., Hosp. de Clinicas, MONTEVIDEO, Uruguay

a Sensory evoked potentials in the fetus. *Homo sapiens (Primates)*

VARMA, H. C. Ph.D., Prof. — Dept. of Anat., Motilal Nehru Med. Coll., ALLAHABAD-1, India

a Structure and composition of the amnion, including its histochemistry and ultrastructure. *Rattus norvegicus (Rodentia), Lepus cuniculus (Lagomorpha)*

b Mechanism of transport of substances across the chorio-amnion. *Rattus norvegicus (Rodentia), Lepus cuniculus (Lagomorpha)*

c Role of endometrium and extraplacental membranes in feto-maternal exchange processes. *Homo sapiens (Primates)* (in collaboration with Miss R. BAJEVA)

d Histochemical and cytochemical studies of the decidua parietalis and capsularis. *Homo sapiens (Primates)*

e Blood vessels of fetal placenta in cases of toxemias of pregnancy, congenital malformations and multiple births. *Homo sapiens (Primates)*

VARMA, R. M.Sc. — Dept. of Biochem., Fac. of Sci., Allahabad Univ., ALLAHABAD-2, India

a Quantitative studies of various metabolites in eggs, e.g. nitrogenous compounds, phosphorus compounds, reducing substances and citric acid. *Philosamia ricini (Lepidoptera), Musca domestica, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT and D. M. LAL)

b Variation in the activity of some enzymes in eggs. *Philosamia ricini (Lepidoptera), Musca domestica, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT and D. M. LAL)

c Quantitative studies of various metabolites during metamorphosis. *Philosamia ricini (Lepidoptera), Musca nebulo, Sarcophaga ruficornis (Diptera)* (in collaboration with Mrs. R. PANT, D. M. LAL and Miss I. D. MORRIS)

d Quantitative studies of certain metabolites and enzymic studies on the fat body during larval and pupal development. *Philosamia ricini (Lepidoptera)* (in collaboration with Mrs. R. PANT, Miss I. D. MORRIS and D. M. LAL)

VARMA, Miss S. K. M.Sc. — Dept. of Zool., Univ. of Udaipur, UDAIPUR, Rajasthan, India

VARON, S. S. M.D., Prof. — Dept. of Biol., Univ. of California, San Diego, P.O. Box 109, LA JOLLA, Calif. 92037, U.S.A.

a In vitro differentiation of nerve tissue

VASSE, J. Lic.ès Sci. — Serv. d'Embryol. Expér. de l'Inst. Pasteur, 20 rue des Moulins, 95 SANNOIS, France

a Researches on the relationship between the somites and the primordia of the forelimbs. *Anguis fragilis (Lacertilia)*

b Research on RNA and DNA synthesis of epidermal and mesodermal cells in the limb buds. *Anguis fragilis, Lacerta viridis (Lacertilia)* (in collaboration with A. RAYNAUD)

VASSETZKY, S. G. Cand.Biol.Sci — Inst. of Develop. Biol., Acad. of Sci. of the U.S.S.R., Vavilov St. 26, MOSCOW B-133, U.S.S.R.

a Dynamics of meiosis and mitosis in eggs. *Ostrea gigas (Lamellibranchia), Strongylocentrotus drobachiensis, S. intermedius (Echinoidea)*

b Production of diploid gynogenesis by means of heat treatment of oocytes at the first maturation division and of chemical treatment (with nitrogen mustard) of sperm. *Acipenser güldenstädti, A. stellatus (Chondrostei)*

VAUGHN, J. E. Ph.D. — Dept. of Anat., School of Med., Boston Univ., 80 E. Concord St., BOSTON, Mass. 02118, U.S.A.

a Electron microscopic study of the formation of myelin sheaths and development of neuroglial cells in the central nervous system. *Rattus domesticus (Rodentia)*
b Electron microscopic study of spinal cord development. *Rattus domesticus (Rodentia)*

VENEZIANO, P. P. Ph.D. — Dept. of Biol., Wilbur Wright Coll., 3400 N.Austin Ave., CHICAGO, Ill. 60634, U.S.A.
a The effect of artificial sweetners on growth and development. *Gallus domesticus (Aves)*
b The effect of antipituitary sera on development. *Gallus domesticus (Aves)*
c The effect of low intensity magnetic fields on the developing nervous system of 24, 36, and 48 hour blastoderms. *Gallus domesticus (Aves)*

VENZKE, W. G. Ph.D., Prof. — Dept. of Vet. Anat., Coll. of Vet. Med., Ohio State Univ., 1900 Coffey Rd., COLUMBUS, Ohio 43210, U.S.A.
a Morphogenesis and physiology of pineal gland. *(Aves)*
b Morphogenesis and physiology of blood. *(Aves)*
c Experimental morphology of pineal gland. *(Bovidae, Mammalia)*

VERBICKY, M. Sh. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

VERDONK, N. H. Ph.D. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
a Cell-lineage and head-pattern in normal and Li-treated embryos. *Limnaea stagnalis (Gastropoda)*
b Cell-lineage and head pattern in heat-shock treated embryos. *Limnaea stagnalis (Gastropoda)*
c Determination of bilateral symmetry in the head region. *Limnaea stagnalis (Gastropoda)*
d Germinal localization in eggs. *Dentalium* spec. *(Scaphopoda); Patella* spec. *(Gastropoda)*

VEREISKAYA, Miss V. N. Cand.biol.sci. — Lab. of Developm. Cytogenet., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

VERHOFSTAD, A. A. J. Med.Drs. — Dept. of Anat. and Embryol., Med. Fac., Univ. of Nijmegen, Geert Grooteplein Noord 21, NIJMEGEN, Netherlands
a Differentiation of epinephrine- and nor-epinephrine-containing cells in the adrenal medulla, studied by histochemical methods. *Mus rattus (Rodentia)*

VERNET, G. Dr.Biol. — Lab. de Biol. Cell., Fac. des Sci., B.P. 347, 51- REIMS, France
a Synthesis of porphyrins during development. *Lineus viridis (Nemertea)*
b Synthesis of porphyrins during anterior regeneration. *Lineus ruber, L. lacteus (Nemertea)*
c Fine structure of photoreceptors during anterior regeneration. *Lineus ruber (Anopla, Nemertini)*

VERNET (CORNUBERT), Mrs. G. Dr.ès Sci., Prof. — Lab. de Physiol. des Invertebrés, Fac. des Sci., Place E. Bataillon, 34-MONTPELLIER, France
a Regeneration of nervous and neurosecretory cells of the eye stalk. *Pachygrapsus marmoratus (Decapoda, Crustacea)*
b Sinus gland regeneration. *Pachygrapsus marmoratus (Decapoda, Crustacea)*

VERNON, G. A. Dr. — Dept. of Chem., Univ. Coll. London, Gower St., LONDON W.C.1, England

VERWOERD, C. D. A. M.D. — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands
a Effects of X-rays on growth and regeneration. *Ambystoma mexicanum (Urodela)*
b Differentiation of germ layers. *(Mammalia)* (in collaboration with C. G. van OOSTROM)
c Development of the pelvic floor in the embryo. *Homo sapiens (Primates)*
d Development of branchial structures in embryos. *Mus* spec. *(Rodentia)*

VIANEY-LIAUD, M. D.E.A. — Lab. d'Evolut., Fac. des Sci. de Paris, 105 Bd. Raspail, 75 PARIS 6, France
a Contrôle des gamétogenèses. *Australorbis glabratus (Pulmonata, Gastropoda)*

VICKER, M. G. B.Sc. — Dept. of Cell Biol., Univ. of Glasgow, GLASGOW W.2, Scotland, U.K.
a The effect on cell interactions of treatments that chemically modify the outer surface of dissociated embryonic cells. *Gallus domesticus (Aves)*

VILÍMKOVÁ (HÁBROVÁ), Mrs. V. RNDr. — Dept. of Exper. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia
a Nucleic acids and subcellular particles in oogenesis and early development. *(Amphibia)* (in collaboration with J. NEDVÍDEK)

VILLA, Miss L. D.Sc. — Ist. di Zool., Univ. di Palermo, Via Archirafi 18, 90123 PALERMO, Italy
a Ultrastructural morphology of oocytes. *Chaetopterus (Polychaeta, Annelida)*
b Electron microscope studies on egg development. *Sternaspis* spec. *(Polychaeta, Annelida)*

VINCENT, W. S. Ph.D., Prof. — Dept. of Anat. and Cell Biol., School of Med., Univ. of Pittsburgh, PITTSBURGH, Pa. 15213, U.S.A. •
a Control of ribosome formation in early oocytes; nucleolar chemistry of oocytes. *Asterias forbesii, Arbacia punctulata (Echinodermata)*

b Analysis of ribosomal gene amplification in oocyte development with respect to uni- and multinucleolate forms. *Asterias forbesii (Asteroidea), Arbacia punctulata (Echinoidea), Roccus saxatilis, Fundulus heteroclitus (Teleostei)*

VISCUSO, Miss R. Dr. — Ist. di Zool., Univ. di Catania, Via Androne 81, 95124 CATANIA, Italy

a Physiological and experimental embryology of the earliest developmental stages. *Eyprepocnemis plorans (Orthoptera)*

VISSER, M. H. C. M.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, S.Africa

a General ontogeny. *Gonaxis gwandaensis (Streptaxidae, Pulmonata)*

VITTORELLI, Miss M. L. Dr.Biol.Sci. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 20, 90123 PALERMO, Italy
(no embryological work in progress)

VIVIEN, J. H. Dr.ès Sci., Prof. — Lab. de Zool. et d'Embryol. Expér., Univ. de Strasbourg 12 rue de l'Université, STRASBOURG, France

VOGE, Mrs. M. Ph.D., Prof. — Dept. of Med. Microbiol. and Immunol., School of Med., Univ. of California, LOS ANGELES, Calif. 90024, U.S.A.

a Asexual reproduction; development of larval stages. *Hymenolepis, Mesocestoides (Cestoda)*

b Growth requirements in vitro. *(Cestoda)*

VOLKOVA, Miss L. S. Dr.Med.Sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

a Peculiarities of the development of foetuses and isoserological characteristics of multiple births. *Homo sapiens (Primates)*

b Experiments with new methods of immunoprophylaxis of hemolytic disease in newborns: 1) use of phenomena of immunological tolerance. 2) transamnion blockage of immune antibodies of maternal blood. *Rattus norvegicus (Rodentia), Papio hamadryas (Primates)*

VOLLRATH, L. Priv.Doz., Dr.med. — Anat. Inst. der Univ., Koellikerstr. 6, 87 WÜRZBURG, W.Germany

a Development of the small intestine under normal and experimental conditions (histology, histochemistry, electron microscopy; absorption of fat, carbohydrates and protein in the fetal bowel; enzyme induction). *Rattes norvegicus (Rodentia)*

VOLPE, E. P. Ph.D., Prof. — Dept. of Biol., Tulane Univ., NEW ORLEANS, La. 70118, U.S.A.

a Neural crest homotransplantation and its relation to the phenomena of immunity and tolerance. *Rana pipiens (Anura)*

b Blood cell chimerism in parabiotic animals, as revealed in chromosome preparations of cultured leucocytes. *Rana pipiens (Anura)*

c Histocompatibility studies in animals produced by nuclear transplantation. *Rana pipiens (Anura)* (in collaboration with R. G. McKINNELL)

VYAZOV, O. E. Dr.med. sci., Prof. — Dept. of Exper. Embryol., Inst. of Exper. Biol., Acad. of Med. Sci of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R. •

WADA, K. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812 Japan

a Regulation of ribosomal RNA synthesis during embryonic development. *Xenopus laevis (Anura)*

WADA, S. Dr.rer.nat. — Zool. Inst., Univ. Düsseldorf, Mettmannerstr. 16-18, 4-DÜSSELDORF, W.Germany

WADDINGTON, C. H. D.Sc., Prof. — Inst. of Anim. Genet., Univ. of Edinburgh, West Mains Rd., EDINBURGH EH9 3JN, Scotland, U.K. •

a Study of certain features of developing embryos by electron microscopy. *(Diptera; Amphibia)* (in collaboration with J. JACOB and Miss M. M. PERRY)

b Development of imaginal buds. *Drosophila* spec. *(Diptera)* (in collaboration with Mrs. E. ROBERTSON (PATON))

c Ultrastructural changes during growth. *Micrasterias thomasiana (Desmidoidea, Conjugales)* (in collaboration with Miss M. M. PERRY)

d Electron microscope studies of mutants. *Drosophila* spec. *(Diptera)* (in collaboration with Miss M. M. PERRY)

e Computer simulation of biological patterns. (in collaboration with R. COWE)

WADLEY, G. W. B.S. — Lab. of Radiat. Ecol., Coll. of Fish., Univ. of Washington, 108 Fisheries Center, SEATTLE, Wash. 98105, U.S.A.

a Effects of ionizing irradiation on different stages of embryos developing at different temperatures. *Oncorhynchus tshawytscha, Salmo gairdnerii (Teleostei)*

WAELSCH, Mrs. S. GLUECKSOHN Ph.D., Prof. — Dept. of Genet., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Rd. & Morris Park Ave., NEW YORK, Bronx. N.Y. 10461, U.S.A. •

a Developmental physiology. *Mus musculus (Rodentia)*

b Developmental genetics. *Mus musculus (Rodentia)*

c Developmental pathology. *Mus musculus (Rodentia)*

WAIDYASEKERA, P. L. D. Ph.D. — Dept. of Biol. Sci., Fac. of Sci., Vidyodaya Univ., Gangodawila, NUGEGODA, Ceylon

a Morphogenetic changes due to various bacterial types used as food during the subcultures. *Acanthamoeba* spec. *(Amoebina)*
b Changes in growth and development in different culture media. *Astasia* spec. *(Euglenophyceae)*

WAINWRIGHT, Mrs. L. K. Ph.D., Prof. — Biochem. Dept., Med. School, Dalhousie Univ., Sir Charles Tupper Building, HALIFAX, N.S., Canada
a Kinetics of synthesis of embryonic and fetal hemoglobin in the blood islands of blastodiscs between the primitive streak and 12-somite stages. *Gallus gallus (Aves)*
b Attempted tissue culture of the erythropoietic tissue of the young blastodisc. *Gallus gallus (Aves)*

WAINWRIGHT, S. D. Ph.D., Prof. — Biochem. Dept., Med. School, Dalhousie Univ., Sir Charles Tupper Building, HALIFAX, N.S., Canada
a Kinetics of synthesis of embryonic and fetal hemoglobins in the blood islands of blastodiscs between the primitive streak and 12-somite stages. *Gallus gallus (Aves)*
b Regulation of synthesis of hemoglobin and blood proteins in the embryo by transfer RNA. *Gallus gallus (Aves)*

WAL, U. P. van der M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
a Localization of protein synthesis during the first cleavages by electron microscope autoradiography. *Lymnaea stagnalis (Gastropoda)*

WALASH, M. N. B,Sc. — Dept. of Zool., Fac. of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt, U.A.R.

WALKER, B. E. M.D., Ph.D., Prof. — Dept. of Anat., Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.
a Teratology, experiments on cleft palate, the action of different chemicals. *Oryctolagus cuniculus (Lagomorpha), Mus musculus (Rodentia)*

WALKER, D. G. Ph.D., D.Sc. — Dept. of Biochem., Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a The development of enzymes and enzyme systems in foetal and neonatal animals, with special reference to carbohydrate metabolism. *(Mammalia)*
b Carbohydrate metabolism of the placenta. *(Mammalia)*

WALLACE, H. Ph.D. — Dept. of Biol., Amherst Coll., AMHERST, Mass. 01007, U.S.A.

WALLACE, R. A. Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A. •
a Comparative biochemistry of yolk protein synthesis, transport and composition. *(Crustacea; Pisces; Amphibia; Aves)*

WARD, R. J. Ph.D. — Pharm. Res. Labs., Reckitt & Sons Ltd., Dansom Lane, HULL, E.Yorks., England
a The teratogenic effects of drugs; testing of drugs for foetal toxicity. *(Mammalia)*

WARKANY, J. M.D., Prof. — Children's Hosp. Research Found., Div. of Teratol., Elland and Bethesda Aves., CINCINNATI, Ohio 45229, U.S.A.

WARNER, E. D. Ph.D., Prof. — Dept. of Zool., Univ. of Wisconsin, MILWAUKEE, Wis. 53201, U.S.A.

WARTENBERG, H. Dr.med., Prof. — Anat. Inst. der Univ., Univ.-Krankenhaus, Martinistr. 52, 2 HAMBURG 20, W.Germany
a Electron microscopic studies on developmental stages of gonads including male and female germ cells. *Homo sapiens (Primates)*
b Fine structure of postnatal development of circumventricular organs (area postrema, subfornical organ, pineal organ) of the brain. *Felis domestica (Carnivora), Macaca mulatta (Primates)*

WARTIOVAARA, J. J. M.D. — Lab. of Exper. Embryol., III Dept. of Pathol., Univ. of Helsinki, Haartmaninkatu 3, HELSINKI 25, Finland
a RNA synthesis during development. *Strongylocentrotus purpuratus (Echinoidea)* (in collaboration with F. H. WILT, Berkeley, Calif.)
b Electron microscopy of cytodifferentiation during kidney tubulogenesis in vitro. *Mus musculus (Rodentia)* (in collaboration with L. O. SAXÉN)
c Effect of tetracycline on osteogenesis in vitro. *Mus musculus (Rodentia)*

WATANABE, H. Ph.D. — Inst. of Zool., Fac. of Sci., Tokyo Kyoiku Univ., Otsuka 3-29-1, Bunkyo-ku, TOKYO, Japan
a Recognition of specificity in compound forms. *Botryllus primigenus, Botrylloides violaceum (Ascidia)* (in collaboration with K. TANAKA)
b Asexual reproduction of compound forms. *Perophora japonica, Polycitor mutabilis, Botryllus primigenus (Ascidia)*

WATANABE, K. Ph.D. — Dept. of Anat., Fac. of Med., Tokyo Med. and Dental Univ., 1-5-47, Yushima, Bunkyo-ku, TOKYO, 113 Japan
a Fibrillogenesis of connective tissue fibres. *Rana catesbeiana, R. japonica, Bufo vulgaris (Anura), Mus musculus (Rodentia), Homo sapiens (Primates)*
b Electron microscopic studies on metamorphosis. *Rana japonica, R. catesbeiana, Bufo vulgaris (Anura)*

WATANABE, K. M.Sc. — Lab. of Developm. Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan

WATANABÉ, T. Dr. — Dept. of Biol., Fac. of Sci., Kônan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan

a Change of ultrastructure during differentiation of embryonic cells. *(Amphibia)*

WATERMAN, Allyn J. Ph.D. — Extramural Programs, Natl. Inst. of Child Health and Human Developm., Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A. •

a Development of structure and function of the thyroid, hypophysis and neuro-secretory system. (higher *Vertebrata)*

b Function of the thyroid gland. *Eptatretus stouti (Myxinoidea, Cyclostomata)*

c Limb regeneration and prolactin. *Diemyctylus viridescens (Urodela)*

WATTERSON, R. L. Ph.D., Prof. — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A. •

a Effects of hypophysectomy on development of musculus complexus and long bones. *Gallus domesticus, Anas boschas (Aves)*

b Correction of defects in pituitaryless embryos with anterior pituitary grafts and injections of trophic hormones. *Gallus domesticus, Anas boschas (Aves)*

c Sources and mechanisms of development of lumbosacral level of neural tube with emphasis on development of myeloschisis. *Gallus domesticus (Aves)*

d Effects of aminoguanidine sulfate on development of liver, mesonephros, metanephros and heart. *Gallus domesticus (Aves)*

WATTS, G. T. Ch.M., F.R.C.S. — Dept. of Surg., Queen Elizabeth Hosp., Edgbaston, BIRMINGHAM 15, England

a Origin of cells in healing wounds.

b Relation of regeneration to reactions of immunity.

c Nature of wound healing in relation to components involved and responsible (mucopolysaccharides and collagen).

d Manganese in relation to wound healing.

WAYMOUTH, Miss C. Ph.D. — The Jackson Lab., BAR HARBOR, Me. 04609, U.S.A.

a Development of Na-K activated ATPase in kidney and lung, i n v i v o and i n v i t r o. *Mus musculus (Rodentia)*

WEAKLY (SHAW), Mrs. B. Ph.D. — Dept. of Anat., Univ. of Dundee, DUNDEE DD1 4HN, Scotland, U.K.

a Cytochemical and autoradiographic investigations of developing germ cells on the electron microscopic level. *Mesocricetus auratus (Rodentia)*

WEBER, R. Ph.D., Prof. — Div. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, CH-3000 BERN, Switzerland •

a Mechanism of tissue involution during metamorphosis. *Xenopus laevis (Anura)* (in collaboration with J.-C. PERNARD)

b Effects of thyroxine on isolated tadpole tails. *Xenopus laevis (Anura)* (in collaboration with Miss E. D. HICKEY)

c Thyroxine and RNA synthesis in tadpole tissues. *Xenopus laevis (Anura)* (in collaboration with H. STADLER)

d Comparative biochemistry and ultrastructure of mitochondria in embryonic systems. (in collaboration with A. KISTLER)

e Developmental significance of cytoplasmic DNA. *Xenopus laevis (Anura)* (in collaboration with P. WELLAUER)

WEBER, W. Dr.rer.nat. — Inst. für vergl. Tierphysiol., Univ., Weyertal 119, 5 KÖLN-Lindenthal, W.Germany
(no embryological work in progress)

WEBSTER, G. C. Ph.D. — School of Biol. Sci., Univ. of Sussex, Falmer, BRIGHTON, Sussex, England

a Regeneration, regulation and pattern formation. *Hydra* spec. *(Hydroidea)*

WECHSLER, W. Dr.med. — Max-Planck Inst. für Hirnforsch., Abt. für allgem. Neurol., Ostmerheimerstr. 200, 5 KÖLN-Merheim, W.Germany

WĘGLARSKA, Miss B. D.Sc. — Zool. Dept., Jagiellonian Univ., ul.Krupnicza 50, KRAKÓW, Poland

a Histochemical studies on development. *Melasoma populi (Coleoptera)*

WEGMANN, R. Dr.en Méd., Dr.ès Sci., Prof. — Inst. d'Histochim. Méd., Fac. de Méd. de Paris, 45 rue des Sts. Pères, PARIS VIe, France

a Enzymology and metabolic pathways of morphogenesis

WEHRMAKER, A. H. Dr.rer.nat. — Dept. of Biol., Fac. of Arts and Sci., Dalhousie Univ., HALIFAX, N.S., Canada

WEIDELI, H. J. Dipl.Phil.II — Zool.-Vergl. Anat. Inst., Univ. Zürich, Künstlergasse 16, CH-8006 ZÜRICH, Switzerland

a Nucleic acids of various mutants. *Drosophila melanogaster (Diptera)*

WEIDMAN, Th. A. Ph.D. — Dept. of Anat., Louisiana State Univ., 1542 Tulane Ave., NEW ORLEANS, La. 70112, U.S.A.

a Ultrastructure of developing retina and correlation with function as indicated by electroretinography. *Rana* spec. *(Anura), Gallus domesticus (Aves), Rattus domesticus, Citellus* spec. *(Rodentia)*

b Ultrastructure of ocular structures other than retina and correlation with functional awakening. *Rana* spec. *(Anura), Gallus domesticus (Aves), Rattus norvegicus, Citellus* spec. *(Rodentia)*

c Ultrastructural aspects of neuro-ophthalmic development; formation of optic nerve, chiasm, lateral geniculate bodies, optic radiations and occipital cortex (where appropriate). *Rana* spec. *(Anura), Gallus domesticus (Aves), Rattus norvegicus, Citellus* spec. *(Rodentia)*

WEIRICH, G. Dr.rer.nat. — Physiol.-Chem. Inst., Fac. of Med., Philipps Univ., 355 MARBURG/Lahnberge, W.Germany

a The role of chromosomes in the regulation of developmental processes (elaboration of an in vitro system for polytene chromosomes). *Calliphora erythrocephala, Rhynchosciara angelae (Diptera)*

WEISHEIT (SCHULTZ), Mrs. P. Ph.D., Prof. — Biol. Dept., Univ. of Colorado, Denver Center, 1100 E. 14th St., DENVER, Colo. 80202, U.S.A.

a Effect of teratological and other deleterious compounds upon the maintenance of pregnancy with especial reference to cytochemical and ultrastructural changes in placental cells. *Mus norvegicus albinus (Rodentia)*

b A comparative cytochemical study of the autophagic area of the developing yolk sac placental cells. *Aplondontia rufa, Erethizon epixanthum (Rodentia)*

WEISS, L. M.D., Ph.D. — Dept. of Exper. Pathol., Roswell Park Mem. Inst., 666 Elm St., BUFFALO, N.Y. 14203, U.S.A. •

WEISS, P. A. Ph.D., Sc.D., Prof. (Emer.) — Lab. of Developm. Biol., Rockefeller Univ., NEW YORK, N.Y. 10021, U.S.A. •

(no embryological work in progress)

WEISS, R. A. B.Sc. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England

a Teratoma cells in vitro. *(Mammalia)*

WEISZ, P. B. Ph.D. — Dept. of Biol., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.

WELANDER, A. D. Ph.D., Prof. — Lab. of Radiat. Ecol., Coll. of Fish., Univ. of Washington, 108 Fisheries Center, SEATTLE, Wash. 98105, U.S.A.

a Effects of graded sublethal doses of X-rays on several different stages of the embryo. *Oncorhynchus kisutch, O. tshawytscha, Salmo gairdnerii (Teleostei)*

b Experimental embryology. *Salmo gairdnerii, Oncorhynchus kisutch, O. tshawytscha (Teleostei)*

c Effects of low, acute doses of X-rays on early development. *Oncorhynchus* spec., *Salmo* spec. *(Teleostei)*

d Effects of ionizing irradiation on different stages of embryos developing at different temperatures. *Oncorhynchus tshawytscha, Salmo gairdnerii (Teleostei)*

WELLAUER, P. — Div. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, CH-3000 BERN, Switzerland

a Developmental significance of cytoplasmic DNA. *Xenopus laevis (Anura)* (in collaboration with R. WEBER)

WELLS, L. J. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A. •

WENDER, M. B. M.D., Prof. — Dept. of Neurol., Med. Acad., Przybyszewskiego St. 49, POZNAŃ, Poland

a The chemical composition and enzyme activity of developing nervous tissue, with special reference to the period of myelination.

b The influence of ionizing radiation on the developing nervous system.

c The influence of asphyxia on the developing nervous system.

d Histoenzymatic architectonics of the developing nervous system.

WENGER, B. S. Ph.D., Prof. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Sask., Canada

a Glucose-6-phosphate dehydrogenase activity in the spinal and sympathetic ganglia of the embryo. *Gallus domesticus (Aves)*

b Nucleotides in the central nervous system and surrounding structures including sensory and sympathetic ganglia. *Gallus domesticus (Aves)*

c Study of the appearance of specific brain antigens during development using the microcomplement fixation technique. *Gallus domesticus (Aves)*

d Morphological and biochemical analysis of the mode of action of the crooked neck dwarf gene. *Gallus domesticus (Aves)*

WENGER, Mrs. E. L. Ph.D. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Sask., Canada

a Glucose-6-phosphate dehydrogenase activity in the spinal and sympathetic ganglia of the embryo. *Gallus domesticus (Aves)*

b Nucleotides in the developing ganglia. *Gallus domesticus (Aves)*

c Development and differentiation of the optic tectum and optic nuclei after early surgical removal of portions of the optic cup. *Gallus domesticus (Aves)*

WENIGER, J.-P. Dr.ès Sci. — Lab. de Zool. et d'Embryol. Expér., Univ. de Strasbourg, 12 rue de l'Université, STRASBOURG, France

WENSING, C. J. G. D.V.M., Ph.D. — Vet. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands

a Mechanism of testicular descent (histology, biochemistry and tissue culture). *(Mammalia)*

WENT, D. — Dept. of Zool., Swiss Federal Inst. of Technol., Universitätstr. 2, 8006 ZÜRICH, Switzerland

a In vivo and in vitro embryology of paedogenetic reproduction. *Heteropeza pygmaea (= Oligarces paradoxus) (Itonididae = Cecidomyiidae, Diptera)*

WERNER, Y. L. Ph.D. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

a Normal development, embryonic and postnatal, of the vertebral column. *(Gekkonoidea, Lacertilia)*

b Tail regeneration, especially skeleton and skin; bifurcate tails. *(Lacertilia)*

c Temperature effects during embryogenesis on the number of vertebrae. *Hemidactylus turcicus, Stenodactylus stenodactylus (Gekkonoidea, Lacertilia)*

WERZ, G. Dr.phil. — Max-Planck-Inst. für Zellbiol., Anton-Dohrn-Weg, Postfach 1009, D 294 WILHELMSHAVEN, W.Germany

a Nucleo-cytoplasmic interactions.

b Mechanism of cell wall differentiation.

c Genesis of endoplasmic membrane systems.

d Morphogenesis of cell constituents.

e Conformational changes of polypeptides and their relationship to morphogenesis.

WESSELLS, N. K. Dr. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif. 94305, U.S.A.

a Induction and cytodifferentiation in pancreatic exocrine cells. *Mus musculus (Rodentia)*

b Epidermal-dermal interaction in relation to histogenesis and to feather germ and limb formation. *(Aves)*

WESTERGAARD, E. M.D. — Dept. of Anat., Royal Dental Coll., AARHUS, Denmark

a Cerebral ventricles of the fetus (studies of the ventricle "models" obtained after injection of Cu-phtalocyanin into the ventricle system followed by clearing). *Homo sapiens (Primates)*

WESTERGAARD, O. Ph.D. — Biol. Inst. of the Carlsberg Found., Tagensvej 16, 2200 COPENHAGEN N., Denmark

a DNA-polymerase activity in correlation to cell cycle and to circumstances where DNA is damaged (UV, X-ray or treatment with chemicals). *Tetrahymena pyriformis (Ciliata)*

WESTERMAN, R. A. Ph.D. — Dept. of Physiol., Monash Univ., CLAYTON, Vict. 3168, Australia

a Histological and electrophysiological aspects of regenerating nerve fibres, particularly in the olfactory system. *Carassius carassius (Teleostei)*

WESTERNHAGEN, H. von. — Inst. für Hydrobiol. und Fischereiwiss., Univ. Hamburg, Olbersweg 24, 2 HAMBURG-Altona 1, W.Germany

a Effect of temperature and salinity on developing eggs. *Belone belone, Gadus morrhua, Pleuronectes flesus, P. platessa (Teleostei)*

WESTON, J. A. Ph.D. — Dept. of Biol., Case Western Reserve Univ., 2080 Adelbert Rd., CLEVELAND, Ohio 44106, U.S.A.

a The migration and differentiation of neural crest cells. *Gallus domesticus (Aves)*

b The cell surface as an effector of cell specificity. *Gallus domesticus (Aves)*

c The action of morphogenetic agents on embryonic cell behavior in vivo and in vitro. *Gallus domesticus (Aves)*

WETHERBEE, D. K. Ph.D., Prof. — Dept. of Forestry and Wildlife Biol., Univ. of Massachusetts, AMHERST, Mass., U.S.A.

WEYGOLDT, P. Dr. — Biol. Inst. I (Zool.) der Univ., Katharinenstr. 20, 78 FREIBURG, W.Germany

a General and comparative embryology. *Pseudoscorpionidea* and other *Arachnida*

b Evolution of embryonic pumping organ, embryonic nutrition and embryonic envelope. *Pseudoscorpionidea* and other *Arachnida*

c Embryology. *Tarantula marginemaculata (Amblypygidae, Araneida, Arachnida)*

d Embryology. *Euphilomedes producta (Ostracoda, Crustacea)*

WHALEY, W. G. Ph.D., Prof. — Cell Research Inst., B.L. 220, The Univ. of Texas at Austin, AUSTIN, Tex. 78712, U.S.A.

a The progessive development and interactions of cellular organelles with differentiation of tissues, together with the modification of this development by various experimental procedures. *Zea mays (Gramineae)*

WHARTON, L. R., Jr. M.D. — Dept. of Gynecol. and Obstet., School of Med., Johns Hopkins Hosp., BALTIMORE, Md. 21205, U.S.A.

a The effect of norethindrone on the pregnant female and fetus. *Macaca mulatta (Primates)*

WHITELEY, A. H. Ph.D., Prof. — Dept. of Zool., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

WHITING, H. P. Ph.D. — Dept. of Zool., Univ. of Bristol, BRISTOL BS8 1UG, England

WHITT, G. S. Ph.D. — Dept. of Zool., Univ. of Illinois, URBANA, Ill. 61801, U.S.A.

a Developmental genetics: 1. expression of differential gene function during early embryogenesis and cytodifferentiation with an emphasis on those genes responsible for isozymes. 2. correlation of lactate dehydrogenase gene homology with the specificity of the gene activating mechanisms during development. 3. genetical, physical, and chemical analysis of the lactate dehydrogenase isozymes unique to the differentiated nervous system. 4. biochemical genetics of isozymes especially lactate dehydrogenase. *Fundulus heteroclitus, Scomber scombrus, Cynoscion regalis* and tropical spp. *(Teleostei)*

b Epigenetic and genetic control of protein synthesis during cytodifferentiation with emphasis on the post-translational control of gene product (especially lactate dehydrogenase isozymes), assembly and function. *(Teleostei* and other *Vertebrata)*

WHITTAKER, J. R. Ph.D. — The Wistar Inst., 36th St. at Spruce, PHILADELPHIA, Pa. 19104, U.S.A.

a Biochemical analysis of differentiation and metaplasia of embryonic eye tissues cultured in vitro. *Gallus domesticus (Aves)*

b Melanin biosynthesis and cell regulatory mechanisms in dfferentiating pigment cells. *Ciona intestinalis, Styela* spec. *(Ascidiae), Gallus domesticus (Aves)*

c Characterization of specific gene expression by primary and established cell cultures.

WHITTEN, W. K. D.Sc., B.V.Sc. — The Jackson Lab., BAR HARBOR, Me. 04609, U.S.A.

a Preimplantation stages of development in vivo and in vitro. *Mus musculus (Rodentia)*

WIDERSTEN, B. Fil.lic. — Zool. Inst., Univ. of Uppsala, Villavägen 9, UPPSALA, Sweden

a Larval development. *(Scyphozoa)*

WIERTZ (HOESSELS), Mrs. E. L. M. J. Ph.D. — Vet. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands

a The influence of penicillin and streptomycin on early development. *Gallus domesticus (Aves)*

b Experiments on neural induction and pattern formation of rhombencephalic and anterior spinal cord region. *Gallus domesticus (Aves)*

WIGGLESWORTH, Sir V. B. Dr., Prof. (Emer.) — Dept. of Zool., Univ. of Cambridge, Downing St., CAMBRIDGE, England

a Mode of action of growth hormones. *Rhodnius prolixus (Triatomidae, Hemiptera)*

WIJFFELS, C. M. — Dept. of Anat. and Embryol., Univ. of Nijmegen, Geert Grooteplein Noord 21, NIJMEGEN, Netherlands

a An autoradiographic study of the development of the cerebellum. *Cricetulus barabensis griseus (Rodentia)*

WILD, A. E. Ph.D. — Dept. of Zool., Univ. of Southampton, SOUTHAMPTON SO9 5NH, England

a Protein transmission across foetal membranes. *Oryctolagus cuniculus (Lagomorpha)*

WILDE, A. G. de M.D., Ph.D., Prof. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands

WILDE, C. E., Jr. Ph.D., Prof. — Dept. of Biol., Grad. School of Arts and Sci.; Lab. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

a Organogenesis in vitro (limb bud, cranial neural crest). *Ambystoma maculatum (Urodela)*

b Cellular differentiation (pigment cell; ectomesenchyme). *Ambystoma maculatum (Urodela)*
1. causal biochemistry of cellular differentiation.
2. differentiation of cytoplasmic fragments.

c Morphology and causal biochemistry of striated muscle differentiation. *Ambystoma maculatum (Urodela)*

d Electrophoresis of molecular constituents of specific embryonic anlagen and cell types: fraction recovery and tissue culture of embryonic cells in the presence of selected fractions. *Ambystoma maculatum (Urodela)*

e Cytochimeras in tissue culture from disaggregated cells of embryos of different classes. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

f Role of probablistic processes in cellular differentiation. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

g Ontogeny of proteins and amino acids. *Fundulus heteroclitus (Teleostei)*

h The energy pathways of differentiating systems. *(Vertebrata)*

i Informational macromolecules in early development and differentiation. *(Echinodermata, Vertebrata)*

j The molecular basis of major and minor symmetry in embryogenesis. *(Vertebrata)*

WILDE, J. de Ph.D., Prof. — Lab. of Entomol., Agric. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands

WILLIAM, Miss N. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt, U.A.R.

WILLIAMS, Miss G. H. Ph.D. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada

WILLIAMS, Mrs. M. LYMAN M.D. — Dept. of Pediat., School of Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

WILLIAMS N. E. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a Electron microscopy of developing oral apparatus. *Tetrahymena* spec. *(Ciliata)*

WILLIER, B. H. Ph.D., Sc.D., Prof. (Emer.) — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A. •

a Adaptive morphogenesis in the yolk-sac membrane. *Gallus domesticus (Aves)*

WILLISON-BARFORD, Mrs. J. B.Sc. — Plant Physiol. Div., Dept. of Scient. and Industrial Research, PALMERSTON NORTH, New Zealand

WILSON, E. B.Sc. — Sect. of Exper. Neurol., Inst. of Neurol., Hosp. de Clinicas, MONTEVIDEO, Uruguay

a Regulation of cochlear input in the developing animal. *Rattus norvegicus (Rodentia)*

WILSON, I. B. Ph.D. — Dept. of Zool., Univ. of North Wales, BANGOR, Caernarvonshire, Wales, U.K.

a Investigations on the establishment of implantation and early pregnancy. *Mus musculus (Rodentia)*

b Experimental developmental morphology. *Mus musculus (Rodentia)*

WILSON, J. G. Ph.D., Prof. — The Children's Hosp. Research Found., Elland and Bethesda Aves., CINCINNATI, Ohio 45229, U.S.A.

WILT, F. H. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY, Calif. 94720, U.S.A. •

a Mechanism of origin of hemoglobin-synthesizing machinery during development. *Gallus domesticus (Aves)*

b Activation of protein and RNA synthesis in cleaving eggs. *Strongylocentrotus purpuratus*

c RNA synthesis during development. *Strongylocentrotus purpuratus (Echinoidea)* (in collaboration with J. J. WARTIOVAARA, Helsinki)

WIMSATT, W. A. Ph.D., Prof. — Div.of Biol. Sci., Cornell Univ., ITHACA, N.Y. 14850, U.S.A. •

WINGSTRAND, K. G. Dr.phil., Prof. — Inst. of Comp. Anat., Universitetsparken 15, COPENHAGEN Ø, Denmark

a Embryology. *Armillifer* spec. *(Linguatulida)* (in collaboration with A. NØRREVANG)

WINNICKI, A. D.Sc. — Fac. of Marine Fish., ul. Kazimierza Królewicza 3, SZCZECIN, Poland

WIREN, A. J. B.Sc. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a The effects of L-tyrosine and L-phenylalanine on the in vitro differentiation of the early (24-32 hr.) neural crest: the frequency of pigment cell differentiation in various concentrations of the two amino acids and an electron microscopic examination of the cultured cells. *Gallus domesticus (Aves)* (in collaboration with C. V. FINNEGAN)

WIRSÉN, C. M.D. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden

WISCHNITZER, S. Ph.D., Prof. — Dept. of Biol., Yeshiva Univ., 186th St. and Amsterdam Ave., NEW YORK, N.Y. 10033, U.S.A.

a Electron microscopic study of oogenesis. *Triturus viridescens (Urodela), Mus albicans (Rodentia), Saimiri sciureus, Homo sapiens (Primates)*

WITHERS, R. F. J. M.Sc. — Dept. of Biol. as Appl. to Med., The Middlesex Hosp. Med. School, Cleveland St., LONDON, W.1. England

a Genetical and developmental study of a trypan blue induced heart malformation. *Rattus norvegicus (Rodentia)*

WITSCHI, E. Ph.D., M.D., Prof. — Biomed. Div., The Population Council, Rockefeller Univ., NEW YORK, N.Y. 10021, U.S.A. •

a Experimental studies on sex development. *Xenopus laevis (Anura)*

b Oogenesis in relation to special hormonal conditions. *Rattus norvegicus (Rodentia), Homo sapiens (Primates)*

c Maturation cycles of eggs in constant-estrus females. *Rattus norvegicus (Rodentia)*

WITTENBORG, M. H. M.D., Prof. — Children's Hosp. Med. Center, 300 Longwood Ave., BOSTON, Mass. 02115, U.S.A.
— Harvard Med. School, 25 Shattuck St., BOSTON, Mass. 02115, U.S.A.

WOELLWARTH, C. v. Dr.phil. — Heiligenberg Inst., 7799 HEILIGENBERG, Baden, W.Germany •

a Autonome Musterbildung in der Medullarplatte. *(Amphibia)*

b Determination der Kopforgane. *(Amphibia)*

c Entstehung von Situs inversus durch Defekte und verschiedene äussere Einflüsse. *(Urodela)*

WOERDEMAN, M. W. M.D., Prof. (Emer.) — Anat.-Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O., Netherlands •

a Lens development. *(Aves; Mammalia)*

WOLF, R. Dr. — Zool. Inst. der Univ., Röntgenring 10, 87 WÜRZBURG, W.Germany
a Correlations between kinematics and specific ultrastructures during early embryogenesis in time-lapse-motion-pictures and electron microscopic investigations. *Wachtliella persicariae (Cecidomyiidae), Chironomus thummi (Chironomidae, Diptera)*

WOLFF (HENNIG), Mrs. Em. Dr.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France •
a Organotypic culture of human cancer tumors taken directly from the patient; long term organotypic culture; culture on embryonic mesonephros; culture on extracts of mesonephros and yeast; fractionation of dialysates of liver extracts. *Gallus gallus (Aves), Homo sapiens (Primates)*

WOLFF, Et. C. Dr.ès Sci., Prof. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France •
a Recherches expérimentales sur l'embryologie et la tératologie; monstres simples, monstres doubles et poly-embryonie. *(Aves)*
b La différenciation sexuelle, par les méthodes de greffes, de castration, d'injections d'hormones et d'explantations; différenciation normale et inversion sexuelle des gonades, des voies génitales et des caractères somatiques précoces. *Gallus* spec. *(Aves)*
c Problèmes relatifs à la régénération. *Polycelis nigra, Euplanaria lugubris (Turbellaria), Triturus cristatus (Urodela)*
d Culture in vitro de longue durée de tumeurs malignes en présence et en l'absence d'organes embryonnaires. *Homo sapiens (Primates)* (en collaboration avec Mrs. Em. WOLFF (HENNIG))
e Recherches sur la différenciation et l'intersexualité in vitro et in vivo des gonades embryonnaires. *(Aves)*

WOLK, M. B.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
a Separation of epiblast from hypoblast by inserted membranes in an attempt to detect possible inductive influences. *Gallus domesticus (Aves)*

WOLPERT, L. Ph.D., Prof. — Dept. of Biol. as applied to Med., The Middlesex Hosp. Med. School, LONDON W.1, England •
a Cellular basis of morphogenesis and pattern formation. *Hydra* spec. *(Hydroidea)*

WOLPOW, E. R. M.D. — Dept. of Neurol., Massachusetts Gen. Hosp., BOSTON, Mass. 02015, U.S.A.

WOLSKY, A. Dr.phil., Prof. — Dept. of Biol., Marymount Coll., TARRYTOWN, N.Y. 10592, U.S.A. •
a Effect of anti-metabolites, antibiotics (especially actinomycin) and nucleic acids on development and regeneration. *Paracentrotus lividus, Arbacia punctulata (Echinoidea), Triturus viridescens, Rana pipiens (Amphibia)*
b A re-investigation of the influence of neurogenesis on the development of the compound eye. *Bombyx mori (Lepidoptera)*

WOOD, J. G. Ph.D., Prof. — Dept. of Anat., The Univ. of Texas Med. School at San Antonio, 7703 Floyd Curl Drive, SAN ANTONIO, Tex. 78229, U.S.A.
a Histochemistry and electron microscopy of developing adrenomedullary cells. *Mus musculus (Rodentia)*

WOODS, J. E. Ph.D. — Dept. of Biol. Sci., De Paul Univ., 1036 W. Belden Ave., CHICAGO, Ill. 60614, U.S.A.
a Hypophysectomy effects upon hydroxysteroid dehydrogenases in the gonads and adrenals of the developing embryo. *Gallus domesticus (Aves)*
b Hypophysectomy effects upon histochemically demonstrable androgens and estrogens in the gonads and adrenals of the developing embryo. *Gallus domesticus (Aves)*
c Ontogenesis of the pituitary-gonadal and pituitary-adrenal axes in the developing embryo. *Gallus domesticus (Aves)*
d Histochemical demonstration of androgens, estrogens and corticoids in the gonads and adrenals of the developing embryo. *Gallus domesticus (Aves)*

WOOL, I. G. Prof. — Dept. of Biol., Div. of Biol. Sci., Univ. of Chicago, CHICAGO, Ill. 60637, U.S.A.
a Regulation of protein synthesis in animal cells and mode of action of insulin

WOOLLAM, D. H. M. M.D., D.Sc. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England
a Teratology. *(Mammalia)*

WOYKE, J. Dr.habil. — Dept. of Beeculture, Agric. Coll., Ursynów, WARSZAWA 12, Poland
a Developmental genetics; sex determination and development of diploid drones. *Apis mellifica (Hymenoptera)*
b Development of reproductive organs and spermatogenesis of diploid drones (larval and pupal stage). *Apis mellifica (Hymenoptera)*

WRBA, H. Dr.med., Dr.rer.nat., Prof. — Inst. für Krebsforsch., Univ. Wien, Borschkegasse 8a, Postfach 72, A-1090 WIEN, Austria
a Stoffwechsel in vitro. *(Rodentia)*

b Eihautbildung, Differenzierung und Missbildung in vitro. *(Rodentia)*
c Heterotransplantation. *(Rodentia)*

WRENN, Mrs. J. O. Th. B.A. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif. 94305, U.S.A.
a A study of the formation of curved structures from relatively flat sheets of cells; possible causes such as intracellular contractile filaments, localized cell multiplication, and localized dissolution of a connective tissue sheath are being investigated in the formation of tubular glands from the oviduct. *Gallus gallus (Aves)*

WRIGHT, Th. R. F. Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va. 22903, U.S.A.
a The genetic control of enzyme activity during development. *Drosophila melanogaster (Diptera)*
b Temperature sensitive lethal mutations affecting embryogenesis. *Drosophila melanogaster (Diptera)*
c Genetic control of myogenesis. *Drosophila melanogaster (Diptera)*

WRÓBLEWSKI, R. Dr.med., Prof. — Dept. of Gen. Biol., Silesian Acad. of Med., K. Marksa 19, Rokitnica, ZABRZE 8, Poland.
a Morphogenetical aspects in the regeneration of endocrine glands, especially the thyroid. *(Rodentia)*

WÜRGLER, F. E. Dr. — Dept. of Zool., Swiss Federal Inst. of Technol., Universitätstr. 2, 8006 ZÜRICH, Switzerland
a X-ray effects on gametes, embryos, larvae and pupae: influence of chromosome configuration, specific genes and developmental stage X-rayed. *Drosophila melanogaster (Diptera)*

WURMBACH, H. Dr., Prof. — Inst. für Landwirtsch. Zool. und Bienenk. der Univ., Melbweg 5, 53 BONN, W.Germany
a Beeinflussung des Wachstums und der Differenzierung durch Wirkstoffe (Schilddrüsenhormon, Steroide, teratogene Substanzen). *Lebistes* spec. *(Teleostei), Xenopus laevis, Bufo bufo (Anura), Gallus gallus (Aves)*
b Formbildende Kräfte beim Wachstum (Wachstumsdynamik); formbildende Bedeutung der Gewebe. *Bufo* spec., *Xenopus laevis (Anura), Gallus gallus (Aves)*

WYATT, G. R. Ph.D., Prof. — Dept. of Biol., Kline Biol. Tower, Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a Protein synthesis, RNA and ribosomes; changes during hormone action and metamorphosis. *Hyalophora cecropia (Lepidoptera)*
b Protein synthesis and transport in oogenesis; regulation by hormones. *Blattella germanica (Orthoptera)*

WYLIE, C. C. B.Sc. — Dept. of Anat. and Embryol., Univ. Coll., Gower St., LONDON W.C.1, England
a Study of the ribonucleic acid metabolism in the early embryo. *Gallus domesticus (Aves)*

WYSOCKA, Miss B. B.Sc. — Dept. of Histol. and Embryol., Acad. of Med., ul.Narutowicza 60, ŁÓDŹ, Poland
a Comparative histochemical and biochemical studies on amounts and distribution of some inorganic salts in spodograms of lungs and of livers in relation to the level of Na, K, and Ca in blood plasma during embryogenesis. *Xenopus laevis (Anura), Rattus norvegicus, Cavia cobaya (Rodentia)*

WYTTENBACH, C. R. Ph.D. — Dept. of Zool., Univ. of Kansas, LAWRENCE, Kansas 66044, U.S.A.

XAVIER MORATO, M. J. Prof. — Inst. de Histol. e Embriol., Fac. de Med., Av. Prof. Egas Moniz, LISBOA 4, Portugal
a Histogenesis of the area postrema. *Felis catus (Carnivora)*
b Histogenesis of the neurohypophysis, at microscopical level. *Felis catus (Carnivora), Oryctolagus cuniculus (Lagomorpha)*
c Action of ionizing radiations upon the embryonated egg. *Gallus domesticus (Aves)* (in collaboration with Mrs. M. J. RODRIGUES CORREIA)

YAJIMA, H. Ph.D. — Biol. Inst., Fac. of Sci., Ibaraki Univ., Bunkyo 2-1-1, MITO-City, Japan
a Comparison of embryonic development between normal and malformed embryos by serial sections of fixed material. *Chironomus dorsalis (Diptera)*
b Malformations induced by irradiation with monochromatic ultraviolet light. *Chironomus dorsalis (Diptera)*
c Effects of temperature during and after centrifugation of eggs on the production of double malformations. *Chironomus dorsalis (Diptera)*
d Effect of ultraviolet irradiation upon the re-entry of pole cells. *Chironomus dorsalis (Diptera)*

YAMADA, K. M. B.A. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif. 94305, U.S.A.
a Study of the synthesis of microtubular protein in nerve ganglia after stimulation with nerve growth factor and the relationship of microtubular synthesis to nerve fiber outgrowth. *Gallus gallus (Aves)*

YAMADA, T. D.Sc., Prof. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. 37830, U.S.A. •
a In vitro differentiation of lens fibers. *Rana pipiens (Anura), Triturus viridescens (Urodela)*
b Activation of cell replication in Wolffian lens regeneration. *Triturus viridescens (Urodela)*
c Dedifferentiation in Wolffian lens regeneration. *Triturus viridescens (Urodela)*

YAMADA, T. M.Sc. — Div. of Biol., Natl. Inst. of Radiol. Sci., Anagawa 4-9-1, CHIBA, (280), Japan
a Biochemical studies on effect of radiation on the embryo. *Oryzias latipes (Teleostei), Bufo vulgaris (Anura)*

YAMADORI, T. M.D., Prof. — Dept. of Anat., Hirosaki Univ. School of Med., Zaifucho-5, HIROSAKI City, Aomori Pref. 036, Japan
a Developmental study of the central nervous system. *Homo sapiens (Primates)*
b Developmental study of the nerve cells in the spinal ganglia. *Rattus norvegicus (Rodentia)*

YAMAGAMI, K. Ph.D. — Zool. Inst., Univ. of Tokyo, Hongo 7-3, Bunkyo-ku, TOKYO, (113) Japan
a Biochemical studies on embryonic and yolk proteins. *(Teleostei)*
b Partial purification of chorionase. *Oryzias latipes (Teleostei)*
c Ontogeny of hemoglobins in embryos and larvae before complete absorption of yolk material. *Salmo gairdnerii* syn. *irideus (Teleostei)*

YAMAGUCHI, T. Ph.D. — Div. of Biol., Natl. Inst. of Radiol. Sci., 4-9-1 Anagawa, CHIBA, (280) Japan
a Regeneration of thymus after radiation-induced involution. *Rattus norvegicus, Mus musculus (Rodentia)*
b Role of thymus in immunogenesis. *Rattus norvegicus, Mus musculus (Rodentia)*

YAMAMOTO, K. D.Sc., Prof. — Lab. of Fresh-water Fish Cult., Dept. of Biol., Fac. of Fisheries, Hokkaido Univ., HAKODATE, Japan •
a Histo-physiological studies of oogenesis. *(Teleostei)*
b Electron microscopical studies of oogenesis. *(Teleostei)*
c Studies on the hormones of reproduction. *(Teleostei)*

YAMAMOTO, T. Dr.Med., Dr.Med.Sci., Prof. — Dept. of Anat., Fac. of Med., Kyushu Univ., FUKUOKA, 812 Japan
a An electron microscope study of the developing intestinal epithelium. *(Mammalia)*

YAMAMOTO, T. D.Sc., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan •

YAMAMOTO, T. S. D.Sc.. — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 10 West 8, SAPPORO, 060 Japan
a Cytochemical investigation on development. *(Teleostei)*

YAMAMURA, H. M.D. — Dept. of Anat., School of Med., Hiroshima Univ., Kasumi-cho, HIROSHIMA, Japan

YAMAMURA, S. M.D. — Japan Dental Pathol. and Embryol. Research Inst., c/o Yamamura Dental Office, No. 12 Higashi-Ichi-Bancho, SENDAI, Japan

YAMANA, K. D.Sc., Prof. — Dept. of Biol., Fac. of Sci., Kyushu Univ., Hakozaki, FUKUOKA, 812 Japan
a Regulation of ribosomal RNA synthesis during embryonic development. *Xenopus laevis (Anura)*

YANAGIMACHI, R. Ph.D. — Dept. of Anat., Univ. of Hawaii, 1951 East-West Rd., HONOLULU, Hawaii 96822, U.S.A.
a In vitro fertilization and development of eggs. *Mesocricetus auratus, Rattus norvegicus, Mus musculus (Rodentia)*
b Chromosomes and development. *Mesocricetus auratus, Rattus norvegicus, Mus musculus (Rodentia)*

YANAGISAWA, T. D.Sc., Prof. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., 2-1-1 chome, Fukazawa-machi, Setagaya-ku, TOKYO (158). Japan
a Phosphagens in egg and spermatozoa. *(Echinodermata)*
b Ion exchange and paper chromatographic studies on the nature of the acid-soluble nucleotides in the egg and their changes during development. *Hemicentrotus* spec., *Anthocidaris* spec., *Pseudocentrotus* spec. *(Echinoidea), Asterias* spec., *Asterina* spec. *(Asteroidea)*
c Tracer experiments on phosphate, sugar and nucleic acid metabolism of embryo. *(Echinodermata)*

YANG, W. T. Ph.D. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, Virginia Key, MIAMI, Fla. 33149, U.S.A.

YASUDA, M. M.D. — Dept. of Anat., Kyoto Univ., Yoshida, Konoe-cho, Sakyo-ku, KYOTO 606, Japan
a Epidemiological studies on anomalies in embryos. *Homo sapiens (Primates)*
b Chromosome aberrations and the sex ratio in embryos. *Homo sapiens (Primates)*
c Morphogenesis of certain malformations of extremities in embryos. *Homo sapiens (Primates)*

YASUDA, Mrs Y. M.D. — Dept. of Anat., Kyoto Univ., Yoshida, Konoe-cho, Sakyo-ku, KYOTO 606, Japan

a Comparative study on in vitro development of organ primordia. *Mus musculus (Rodentia), Homo sapiens (Primates)*

YATVIN, M. B. Ph.D. — Dept. of Radiol., Med. School, Univ. of Wisconsin, 1300 University Ave., MADISON, Wis. 53706, U.S.A.

YAZAKI, Miss I. M.A. — Embryol. Sect., Dept. of Biol., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

YAZYKOV, A. A. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya St. 8, MOSCOW A-315, U.S.S.R.

YNTEMA, C. L. Ph.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE, N.Y. 13210, U.S.A. •

a Development of carapace. *Chelydra serpentina (Chelonia)*

b Incidence of twinning. *Chelydra serpentina (Chelonia)*

c Acceptance of homografts and xenografts during embryonic stages. *(Chelonia)*

YOSHIDA, K. Ph.D. — Dept. of Radiotherapy, Cancer Research Lab., Mercy Hospital, 1400 Locust St., PITTSBURGH, Pa. 15219, U.S.A.

a Macromolecular synthesis during lens differentiation in vitro. *Gallus domesticus (Aves)*

YOSHIKAWA, I. — Dept. of Genet., School of Med., Nagasaki Univ., 12-4, Sakamoto-machi, NAGASAKI, Japan

a Radiation genetics (embryo, germ cells). *Drosophila melanogaster (Diptera)*

YOSHIKAWA (FUKADA), Mrs. M. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

a Animal viruses (esp. tumor viruses) as tools in studying embryonic development. *Gallus gallus (Aves)* (in collaboration with J. D. EBERT and R. J. HAY)

YOUNG, B. — Dept. of Botany, Univ. of Alberta, EDMONTON, Alta., Canada

YOUNG, B. A. M.D., Ph.D. — Anat. School, Univ. of Cambridge, Downing St., CAMBRIDGE CB2 3DY, England

a Electron microscopy of the placenta. *(Pinnipedia, Cetacea)*

b Electron microscopy of developing endocrine glands. *(Pinnipedia, Cetacea)*

YÜ (KOU), Mrs. N. W. B.S. — Dept. of Biomorph., Natl. Defense Med. Center, P.O. Box 7432, TAIPEI, Taiwan, Republ. of China

a Tadpole tissue competence to thyroxin treatment at different periods after thyroidectomy. *Rana* spec. *(Anura)*

b Growth and pituitary cytology of thyroidless adults induced from thyroxin treatment on thyroidectomized tadpoles. *Rana* spec. *(Anura)*

YUROVITZKY, Yu. G. Cand.biol.sci. — Lab. of Developm. Biophys., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

YVROUD, Miss M. — Lab. d'Anat. Comp., Fac. des Sci. d'Orsay, Univ. de Paris, Bâtiment 441, 91-ORSAY, France

a Etude expérimentale du développement du canal naso-lacrymal chez les larves. *Discoglossus pictus, Alytes obstetricans (Anura)*

ZAAIJER, Miss J. J. P. Ph.D. — Lab. for Cell Biol. and Histol., Fac. of Med., State Univ., Rijnsburgerweg 10, LEIDEN, Netherlands •

a Limb development (organ culture). *(Vertebrata)*

b Hormonal activity of fetal gonads and adrenal glands with regard to the development of the reproductive tract (organ culture). *(Aves; Mammalia)*

ZACCANTI, F. Dr. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy

a In vitro culturing of larval and adult gonads. *Bufo bufo, Rana dalmatina (Anura)*

b Hormonic regulation of ovarian and Bidder's organ oogenesis. *Bufo bufo (Anura)*

ZAFFAGNINI, F. Dr., Prof. — Inst. of Zool., Fac. of Sci., Univ. of Bologna, Via S. Giacomo 9, 40126 BOLOGNA, Italy

a Cytochemical and electron microscopical study of the nurse-cells and oocyte differentiation. *Daphnia magna (Cladocera)*

b Endocrine centres, growth, moulting and gametogenesis. *Daphnia magna (Cladocera)*

c Organization of reproductive system and gametogenesis. *Limnadia lenticularis (Conchostraca), Derocheilocaris remanei (Mystacocarida, Crustacea)*

ZAFIRATOS, K. Ph.D. — Zool. Lab. and Museum, Fac. of Sci., Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece

ZAHLAVA, J. MUDr., CSc. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia

ZALIK, S. Ph.D., Prof. — Div. of Plant Biochem. and Physiol., Dept. of Plant Sci., Univ. of Alberta, EDMONTON, Alta., Canada

ZAMBONI, L. M.D., Prof. — Dept. of Pathol., Harbor Gener. Hosp., U.C.L.A., 1000 W. Carson St., TORRANCE, Calif. 90509, U.S.A.

a Electron microscope studies on the fertilization process. *Homo sapiens* and other spp. *(Primates)*

b Embryonal development. *Homo sapiens (Primates)*

ZAVANELLA, Miss T. Dr.biol.sci. — Cat. di Anat. Comp., Univ. di Milano, Via Celoria 10, MILANO, Italy

ZEILMAKER, G. H. Ph.D. — The Netherlands Cancer Inst., Sarphatistraat 108, AMSTERDAM, Netherlands
a Endocrine aspects of blastocyst-implantation. *Rattus norvegicus (Rodentia)*
b Egg transplantation. *Mus musculus (Rodentia)*
c Development of ectopic trophoblast. *Rattus norvegicus, Mus musculus (Rodentia)*

ZELENÁ (TOPIČOVÁ), Mrs. J. MUDr., C.Sc. — Lab. of Electr. Microsc., Inst. of Physiol., Czechoslov. Acad. of Sci., Flemingovo n. 2, PRAHA 6, Czechoslovakia

ZERBIB, C. D.E.S. — Lab. de Génét. Evolut. et de Biométrie, C.N.R.S., 91 GIF-sur-YVETTE, France
a Contrôle endocrine de la différenciation sexuelle. *Lithobius forficatus (Chilopoda)*
b Développement post-embryonnaire de l'appareil génital. *Scolopendra canidens (Chilopoda)*

ZILLER (SENGEL), Mrs. C. Dr.ès Sci — Inst. d'Embryol. et Tératol. Expér. du C.N.R.S., 49bis Av. de la Belle Gabrielle, 94-NOGENT-sur-MARNE, France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place M. Berthelot, PARIS Ve, France
a In vitro culture of regenerating tissues and organs. *Dugesia lugubris, D. tigrina, Polycelis nigra (Turbellaria)*
b Influence of various factors (tissue and organ extracts) on pharynx regeneration. *Dugesia lugubris, D. tigrina, Polycelis nigra (Turbellaria)*

ZIMMERMAN, A. A. Prof. (Emer.) — Dept. of Anat., Coll. of Med., Baylor Univ., HOUSTON, Tex., U.S.A. •

ZIMMERMANN, W. Dr.rer.nat. — Arbeitsgr. Prof. G. H. M. Gottschewski am Max-Planck-Inst. für Immunbiol., Stefan-Meier-Str. 8, 78 FREIBURG, W.Germany
a Normal development of early stages with special reference to the immunological and nutritional relations with the mother. *Mesocricetus auratus, Cavia cobaya (Rodentia)*
b Determination and diffentiation of the organ anlagen analysed by the use of teratogenic substances. *Mesocricetus auratus, Cavia cobaya (Rodentia)*

ZINN, K. M. M.D. — Ophthalmol. Dept., The Mount Sinai Hosp., 100th St. and Fifth Ave., NEW YORK, N.Y. 10029, U.S.A.
a Corneal morphogenesis (electron microscopy etc.). *Gallus domesticus (Aves)*
b Lens morphogenesis (electron microscopy etc.). *Gallus domesticus (Aves)*
c The effects of lens removal on the development of the cornea. *Gallus domesticus (Aves)*
d Protein synthesis in the developing lens (electron microscopy, sucrose density gradients, autoradiography etc.). *Gallus domesticus (Aves)*

ZITO (BIGNAMI), Mrs. R. Ph.D. — Lab. di Radiobiol. Anim., C.S.N. - Casaccia, C.P. 2400, 00100 ROMA, Italy
a Cell differentiation and developmental genetics.
b Molecular mechanisms of early embryonic differentiation. *Mus musculus (Rodentia)*

ZOTIN, A. I. Dr.biol.sci. — Lab. of Developm. Biophys., Inst. of Developm. Biol., Acad. of Sci. of the U.S.S.R., 26 Vavilov St., MOSCOW V-133, U.S.S.R.

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ZUCKERMAN, Sir S. M.D., D.Sc., Prof. — Zool. Soc. of London, Regent's Park, LONDON N.W.1, England
a Development of the reproductive system; gametogenesis. *(Rodentia; Primates)*

ZÜST, Miss B. Lic.ès Sci. — Lab. de Zool., Fac. des Sci. de Grenoble, Cedex 53, 38 GRENOBLE, France
a Effects of hydrocortisone on the development of skin and feathers; sensitivity of dermis and epidermis to hydrocortisone (electron microscopy). *Gallus domesticus (Aves)*

ZWAAN, J. M.D., Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va. 22901, U.S.A. •
a Analysis of macromolecular synthesis during induction and differentiation of the eye lens. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b Developmental genetics of mutations affecting eye development. *Mus musculus (Rodentia)*

ZWILLING, E. Ph.D., Prof. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A. •
a Disaggregation and reaggregation of early embryos; effects on differentiation. *Gallus domesticus (Aves)*
b Culture behaviour of early embryonic tissues. *Gallus domesticus (Aves)*
c Ectoderm-mesoderm interaction in limb development. *Gallus domesticus (Aves)*

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SUBJECT INDEX

(alphabetical order)

Although the Index is intended to be self-explanatory, some introductory remarks may be useful.

The Index covers not only embryology, but the whole of *developmental biology*. It is composed of *headings* (large capitals) and *entries* (small print and small capitals). The names printed in small capitals refer to the Directory of Names, where the corresponding research subjects may be found.

The *headings* generally come under one of the following categories: 1) disciplines, 2) techniques, 3) cells, organs and other body components, 4) substances or classes of substances, 5) developmental stages, processes or factors.

Since virtually all the *entries* in the Index refer to developmental processes, the word *"development"* is omitted unless used in a general sense. In general, an attempt has been made to start the entries with the most informative word, but it was impossible to avoid that entries sometimes start with an adjective of a rather unspecific character, such as: comparative, descriptive, experimental; abnormal, normal; early, late. Such entries are easily overlooked in a search for specific information, particularly in the longer sections. Entries also frequently start with such phrases as "effect on/of" and "relation with". Prepositions very seldom figure as the first word of an entry (except in the phrase "in vitro"); where they do, they are found at their proper place in the alphabet.

In order to increase the efficiency of the Index, special care has been devoted to *cross-references*. Moreover, subjects have been brought under *as many headings as possible*. This of course results in a certain amount of redundant information, but it is felt that this is outweighed by the greater chance for the user of finding a particular subject he is interested in.

All the work on *multicellular plants* and on *slime molds* is brought together under one heading: "PLANT EMBRYOLOGY & MORPHOGENESIS (experimental & physiological)". All the work on *unicellular organisms* (including unicellular plants) is listed under the heading "UNICELLULAR ORGANISMS".

Genus and *species* names are not used in the entries, with the exception of the designation *Homo* for the human species. For various reasons it is impossible to provide a separate taxonomic index. Those who are looking for work on a *specific taxonomic group* are advised to start with the headings of a general nature, such as "Asexual reproduction", "Development", "Embryology", "Life cycles", "Metamorphosis", "Morphogenesis", "Plant embryology & morphogenesis", "Regeneration", "Reproduction", "Unicellular organisms", etc.

In the case of work carried out jointly by two or more investigators, *all collaborators* are listed in alphabetical order. Since *initials of first names* are omitted from the entries, it may sometimes be necessary to check two or more investigators of the same surname in the Directory of Names.

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—, —, *Teleostei* BOULEKBACHE
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Communications from the HUBRECHT LABORATORY

I The scientific staff

In June 1969 an eleventh member joined the staff: Mr. S. W. de Laat, M.Sc. He will be in charge of the new research unit of developmental biophysics. With his arrival the scientific staff is complete, and the space available for research units in the Laboratory is fully occupied.

Mr. J. A. Leussink, M.Sc., who served the Laboratory as its Administrator through a long series of years, left the Laboratory on October 1st. The vacancy will be filled in 1970.

II Annual Scientific Report

It has been decided henceforth to publish an annual scientific report in English. The report will be printed by the Royal Netherlands Academy of Sciences and Letters, and will be distributed on a large scale in the form of a reprint. The report for 1968 is fortcoming.

III The international team project

The *seventh international team in embryology* will most probably meet in the first half of 1972. The subject has not yet been fixed. A circular pertaining to the team will be distributed at least 1½ year in advance.

IV Foreign guests

Most of the guests who worked at the Laboratory in 1969 were already there in the preceding year, and their research subjects were listed in the Supplement to the twelfth issue of this periodical, 1968.

Dr. J. G. Hollyfield (Austin, Tex.) left in August after a stay of two years.

The four members of the sixth international team who had stayed on after July 1968, Dr. R. Adler (Buenos Aires), Dr. M. B. Burnside (Austin, Tex.), Dr. L. Luckenbill (Boston, Mass.), and Miss S. Sudarwati (Bandung, Indonesia), all left during the second half of the year.

Dr. N. Nikitin (Leningrad) left in April, Dr. R. W. Glade (Burlington, Vt.) in May, and Dr. I. Slabý (Plzeň, Czechoslov.) in August.

Mr. C. F. A. Rosa, M.Sc. (São Paulo, Brazil) stayed at the Laboratory troughout the year, carrying out an experimental study of pattern formation in the presumptive prosencephalon of urodeles in collaboration with Dr. E. C. Boterenbrood.

Dr. W. P. Luckett (Madison, Wis.) stayed at the Laboratory from May till July to work in the Central Embryological Collection (early mammalian placentation). Dr. M. Klíma (Brno, Czechoslov.) worked in the Collection for two weeks during November (development of the sternum in monotremes and marsupials). Dr. K.-I. Sirakami (Yamanashi Univ., Kôfu) visited the Laboratory for three weeks during August and September, mainly to use the Central Embryological Library.

V Facilities for international use

These facilities comprise the Central Embryological Collection, and the Central Embryological Library, with its extensive reprint collection and its bibliographical and copying services. Details pertinent to these facilities may be found in the information booklet distributed on a large scale in 1966. This booklet is available on request. A special leaflet describing the Central Embryological Library and its facilities is also available on request.

Communications of the
INTERNATIONAL SOCIETY
OF DEVELOPMENTAL BIOLOGISTS (formerly I.I.E.)
(Developmental Biology Section of the I.U.B.S.)

The I.S.D.B. announces with deep regret the death of its emeritus member A. Kühn (Tübingen), and of its member K. Bier (Münster).

In accordance with the decision taken by the latest General Assembly the I.S.D.B. is sponsoring a number of small *Workshops* on important problems in developmental biology to be held in different parts of the world. Attendance will be limited by invitation to a small group of participants, but will also be open to a number of local observers.

The first of these Workshops was devoted to "Morphogenetic tissue interactions" and was held on September 2—4, 1969 in Helsinki, Finland. Dr. L. Saxén was chairman of the local organizing committee.There were 32 participants from 14 countries, and 14 local observers. The Ministry of Education of Finland acted as co-sponsor. Several other Workshops are in the active planning stage.

At present the I.S.D.B. has 454 members; 139 new members were accepted by the Board in 1969. A complete membership list is given below. The Board should like to see the membership become *fully representative of developmental biology,* and therefore earnestly solicits proposals as well as spontaneous applications for membership. The procedure is as follows:

a) Candidates for membership can be proposed or supported by *two members* at any time. The Board screens the applications once or twice a year, and decides about acceptance by simple majority of votes among its members.

b) The requirement for membership is that the candidate should have made *a substantial contribution to the field of developmental biology.* The Board decides whether a particular applicant meets this standard.

c) Proposals must be accompanied by a *curriculum vitae* and *a list of publications* of the candidate, and should be sent either to Prof. E. Zwilling, Dept. of Biol., Brandeis Univ., Waltham, Mass. 02154 ,U.S.A., or to Prof. P. D. Nieuwkoop, Hubrecht Laboratory, Uppsalalaan 1, Universiteitscentrum "De Uithof", Utrecht, Netherlands.

Composition of the Board of the I.S.D.B. (1968—1973)

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Past President	Et. Wolff, France
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Membership List of the I.S.D.B.

(alphabetical order, with years of election; * emeritus members)

This list was drawn up on December 1st, 1969. For full addresses see "General Embryological Information Service", thirteenth issue, 1969 and supplement, 1970.

Miss U. Abbott, Washington, D.C., '64
M. Abercrombie, London, Eng., '56
H. B. Adelmann*, Ithaca, N.Y., '48
B. A. Afzelius, Stockholm, '64
I. P. S. Agrell, Lund, '60
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J. F. Albright, Oak Ridge, Tenn., '69
R. D. Allen, Albany, N.Y., '57
E. C. Amoroso, London, Eng., '60
R. M. Amprino, Bari, '60
E. M. Anderson, Amherst, Mass., '69
G. Andres, Mainz, '57
Th. S. Argyris, Syracuse, N.Y., '70
J. Ariëns Kappers, Amsterdam, '60
H. L. Arora, '64
B. L. Astaurov, Moscow, '56
R. Auerbach, Madison, Wis., '70
C. R. Austin, Cambridge, Eng., '57
M. Avel, Talence, '48
C. Baglioni, Cambridge, Mass., '69
J. T. Bagnara, Tucson, Ariz., '67
B. I. Balinsky, Johannesburg, '48
W. W. Ballard, Hanover, N.H., '70
F. Baltzer*, Bern, '48
C. Barigozzi, Milano, '60
H. J. Barr, Madison, Wis., '70
L. G. Barth, Woods Hole, Mass., '48
Mrs. L. J. Barth, Woods Hole, Mass., '69
R. A. Beatty, Edinburgh, '56
F. Beck, London, Eng., '66
H. J. Becker, München, '67
W. Beermann, Tübingen, '60
J. C. Beetschen, Toulouse, '67
E. Bell, Cambridge, Mass., '69
Mrs. M. R. Bellairs, London, '60
M. Benazzi, Pisa, '56
J. A. A. Benoit, Nogent sur Marne, '60
H. D. Berendes, Nijmegen, '69
W. E. Berg, Berkeley, Calif., '57
H. Bergquist, Göteborg, '57
Miss J. H. Bijtel*, Groningen, '56
W. J. Birge, Lexington, Ky., '70
M. Birnstiel, Edinburgh, '69
D. W. Bishop, Toledo, Ohio, '70
Mrs. S. M. Bishop (Calame), Davis, Calif., '67
R. E. Black, Williamsburg, Va., '69
A. W. Blackler, Ithaca, N.Y., '69
D. P. Bloch, Austin, Tex., '69
R. F. Blount, Galveston, Tex., '60
C. W. Bodemer, Seattle, Wash., '70
D. Bodenstein, Charlottesville, Va., '56
E. J. Boell, New Haven, Conn., '57
J. T. Bonner, Princeton, N.J., '60
E. Borghese, Napoli, '56
B. G. Böving, Baltimore, Md., '57
J. L. A. Brachet, Rhode-St-Genèse, '48
S. K. Brahma, Utrecht, '66
F. W. R. Brambell, '56
A. C. Braun, New York, N.Y., '70
P. L. Brien*, Bruxelles, '48
R. W. Briggs, Bloomington, Ind., '56
H. V. Brondsted*, Copenhagen, '48
D. D. Brown, Baltimore, Md., '69
C. Burdon-Jones, Townsville, Qld., '60
R. K. Burns, Bridgewater, Va., '52
D. N. Butcher, Cambridge, Eng., '70
E. G. Butler, Princeton, N.J., '56
J. M. Butros, Beirut, '67
R. D. Cahn, Seattle, Wash., '69
J. M. Cairns, Springville, N.Y., '69
R. Cambar, Talence, '57
E. van Campenhout, Louvain, '48
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E. W. Caspari, Rochester, N.Y., '60
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H. B. Chase, Providence, R.I., '60
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G. Chieffi, Napoli, '64
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J. M. J. Clavert, Strasbourg, '57
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A. C. Clement, Atlanta, Ga., '57
U. Clever, Lafayette, Ind., '69
S. Cohen, Nashville, Tenn., '64
J. R. Coleman, Providence, R.I., '70
A. Collenot, Paris, '69
J. R. Collier, New York, N.Y., '69
G. Colombo, Ferrara, '60
A. L. Colwin, New York, N.Y., '56
Mrs. L. H. Colwin, New York, N.Y., '60
C. E. Corliss, Memphis, Tenn., '70
G. W. Corner*, Philadelphia, Pa., '52
D. P. Costello, Chapel Hill, N.C., '48
A. J. Coulombre, Bethesda, Md., '69
M. Crippa, Palermo, '70
Y. Croisille, Nogent sur Marne, '66
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Mrs. J. C. Dan, Tokyo, '57
K. Dan, Tokyo, '57
J. C. Daniel Jr., Boulder, Colo., '70
J. Dankmeijer, Leiden, '60
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M. De Vincentiis, Camerino, '64

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A. Dollander, Nancy, '60
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Mrs. A. A. Ficq, Rhode-St. Genèse, '60
G. Filogamo, Torino, '60
C. V. Finnegan, Vancouver, B.C., '70
M. Fischberg, Genève, '57
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T. Thomson Flynn*, '38
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T. Fujii, Tokyo, '60
P. J. Gaillard, Leiden, '60
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L. Gallien, Paris, '56
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T. W. Glenister, London, Eng., '60
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Ph. Grant, Eugene, Ore., '64
P. B. Green, Philadelphia, Pa., '70
J. H. Gregg, Gainesville, Fla., '69
J. R. Gregg, Durham, N.C., '57
T. A. I. Grillo, Ibadan, '66
C. Grobstein, La Jolla, Calif., '56
Z. Grodziński*, Kraków, '60
J. Gross, Boston, Mass., '70
P. R. Gross, Cambridge, Mass., '69
H. Grüneberg, London, Eng., '56
J. B. Gurdon, Oxford, '69
T. Gustafson, Stockholm, '56
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A. Haget, Talence, '60
T. Hama, Nagoya, '60
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J. Hämmerling, Wilhelmshaven, '60
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O. Hess, Freiburg, '69
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J. K. F. Holtfreter, Rochester, N.Y., '36
H. Holtzer, Philadelphia, Pa., '60
S. Hörstadius*, Uppsala, '48
Y. Hotta, La Jolla, Calif., '70
Ch. Houillon, Paris, '67
J. M. T. Hultin, Stockholm, '56
R. R. Humphrey*, Bloomington, Ind., '49
Miss T. Humphrey, Birmingham, Ala., '56
M. Ichikawa, Kyoto, '60
J. Ishida, Urawa, '60
M. Ishikawa, Toba, '70
A. G. Jacobson, Austin, Tex., '70
D. C.-O. Jacobson, Uppsala, '69
L. F. Jaffe, Lafayette, Ind., '70
J. Jansen*, Oslo, '60
Miss A. G. Johnen, Köln, '64
A. D. Jost, Paris, '56
T. Kajishima, Nagoya, '60
A. J. B. Källén, Lund, '60
Y. Kanoh, Akkeshi, '60
S. Karasaki, Montreal, '69
I. Kawakami, Fukuoka, '57
N. E. Kemp, Ann Arbor, Mich., '57
A. Keynan, Jerusalem, '70
Mrs. M. A. Sengel Kieny, Grenoble, '64
R. C. King, Evanston, Ill., '70
T. J. King, Washington, D.C., '60
V. Kiortsis, Athens, '69
A. O. Klein, Waltham, Mass., '70
N. W. Klein, Storrs, Conn., '70
Mrs. U. Kocher-Becker, Heiligenberg, '66
W. Kocher, Heiligenberg, '66
L. D. Koehler, Mt. Pleasant, Mich., '70
J. J. Kollros, Iowa City, Iowa, '56
I. R. Konigsberg, Charlottesville, Va., '69
K. Kratochwil, Wien, '69
G. Krause, Würzburg, '56
A. Krishnakumaran, Cleveland, Ohio, '70
Miss T. K. Kuusi, Helsinki, '56
J. C. Lacroix, Paris, '69
R. A. Lallier, Villefranche sur Mer, '60
W. Landauer*, London, Eng., '57
A. Lang, East Lansing, Mich., '70
J. Langman, Charlottesville, Va., '56
J. W. Lash, Philadelphia, Pa., '69
H. Laufer, Storrs, Conn., '69
Mrs. L. Lazard (Hauben), Nogent sur Marne, '68
S. Leghissa, Bologna, '60
H. E. Lehman, Chapel Hill, N.C., '57
F. E. Lehmann, Bern, '48
J. Leighton, Pittsburgh, Pa., '70
Th. Lender, Orsay, '60
H. M. Lenhoff, Irvine, Calif., '70
V. Leone, Milano '57
Miss R. Levi-Montalcini, St. Louis, Mo., '56
M. Locke, Cleveland, Ohio, '70

G. V. Lopashov, Moscow, '48
S. Lovtrup, Umeå, '60
H. Lutz, Clermont-Ferrand, '57
D. J. McCallion, Hamilton, Ont., '64
Miss R. Maggio, Palermo, '64
T. Mann, Cambridge, Eng., '60
Mrs. L. Marin (Lewin), Paris, '68
C. L. Markert, New Haven, Conn., '57
E. Marrè, Milano, '69
P. N. Martinovitch, Beograd, '60
J. P. Mascarenhas, Albany, N.Y., '70
Y. Masui, Toronto, Ont., '69
C. B. Metz, Coral Gables, Fla., '56
Y. Mikami, Tsu, '60
J. Milaire, Bruxelles, '64
R. D. Milkman, Iowa City, Iowa, '70
A. Minganti, Genova, '56
Miss B. Mintz, Philadelphia, Pa., '57
A. Monroy, Napoli, '56
Miss F. Moog, St. Louis, Mo., '56
S. Mookerjee, Calcutta, '60
Mrs. B. C. Moore, Riverside, Calif., '69
J. A. Moore, Riverside, Calif., '57
A. A. Moscona, Chicago, Ill., '57
H. W. Mossman*, Madison, Wis., '56
I. Motomura*, Sendai, '57
Mrs. L. Mulherkar, Poona, '69
J. G. Mulnard, Bruxelles, '57
Mrs. M. R. Murray, New York, N.Y., '60
G. W. Nace, Ann Arbor, Mich., '60
O. Nakamura, Osaka, '57
E. Nakano, Nagoya, '57
J. Needham, Cambridge, Engl., '48
L. Nelson, Toledo, Ohio, '70
M. Nemer, Philadelphia, Pa., '69
D. A. T. New, Cambridge, Eng., '69
D. R. Newth, Glasgow, '57
G. Nicolet, Genève, '69
P. D. Nieuwkoop, Utrecht, '57
H. Nishimura, Kyoto, '69
M. C. Niu, Philadelphia, Pa., '56
H. Oka, Tokyo, '60
T. S. Okada, Kyoto, '60
Y. K. Okada*, Tokyo, '52
Miss K. Okazaki, Tokyo, '60
O. M. Olivo, Bologna, '57
Miss J. M. Oppenheimer, Bryn Mawr, Pa., '56
R. O'Rahilly, Baltimore, Md., '64
Mrs. M. C. Ward Orsini, Madison, Wis., '64
F. Orts Llorca, Madrid, '56
Mrs. J. H. Overton, Chicago, Ill., '60
S. Pai, Shanghai, '48
J. Papaconstantinou, Oak Ridge, Tenn., '69
P. Pasquini, Roma, '57
J. J. Pasteels, Bruxelles, '38
B. M. Patten*, Ann Arbor, Mich., '56
J. Paul, Glasgow, '69
C. Pelling, Tübingen, '69
S. Penman, Cambridge, Mass., '69
H. P. Perlmann, Stockholm, '60
G. W. Philpott, St. Louis, Mo., '70
J. Piatigorsky, Bethesda, Md., '70
J. Piatt, Philadelphia, Pa., '60
L. J. Pierro, Storrs, Conn., '70
L. Pikó, Pasadena, Calif., '64
L. V. Polezhaev, Moscow, '48
K. R. Porter, Cambridge, Mass., '64
D. F. Poulson, New Haven, Conn., '60
Mrs. N. M. Pourreau (Schneider), Paris, '68
Miss D. Price, Chicago, Ill., '60
S. Ranzi, Milano, '48
M. H. J. Rapola, Helsinki, '69
L. Raunich, Ferrara, '56
Chr. P. Raven, Utrecht, '41
Mrs. M. E. Rawles (Spurbeck), Baltimore, Md., '56
A. Raynaud, Sannois, '60
G. Reverberi, Palermo, '48
R. W. Reyer, Morgantown, W.Va., '56
G. G. Robertson, Memphis, Tenn., '66
K. T. Rogers, San Francisco, Calif., '64
S. M. Rose, Belle Chasse, La., '56
J. Rostand*, Ville d'Avray, '60
L. N. Ruben, Portland, Ore., '68
J. V. Ruch, Strasbourg, '69
F. H. Ruddle, New Haven, Conn., '70
Miss D. Rudnick, '56
M. N. Runner, Boulder, Colo., '60
J. A. M. Runnström*, Stockholm, '48
H. Sakai, Tokyo, '69
M. Sala, New York, N.Y., '60
Miss B. Salzgeber, Nogent sur Marne, '64
K. Sander, Freiburg, '66
T. Sato, Nagoya, '57
H. W. Sauer, Heidelberg, '70
J. W. Saunders, Albany, N.Y., '56
L. O. Saxén, Helsinki, '60
E. Scarano, Napoli, '69
Mrs. D. Scheib (Pfleger), Nogent sur Marne, '64
K. Scherrer, Lausanne, '69
J. A. Schiff, Waltham, Mass., '70
H. A. Schneiderman, Irvine, Calif., '64
Mrs. J. Schoeller (Raccaud), Paris, '69
O. E. Schotté, Amherst, Mass., '56
B. Schreiber, Parma, '56
H. M. Schulman, La Jolla, Calif., '69
R. L. Searls, Philadelphia, Pa., '70
S. N. Sedra, Alexandria, '60
S. J. Segal, New York, N.Y., '57
F. Seidel, Marburg, '60
G. G. Selman, Edinburgh, '60
K. Sembrat, Wrocław, '60
Ph. Sengel, Grenoble, '60
E. C. Sensenig, Birmingham, Ala., '57
P. Sentein, Montpellier, '60
S. Shapiro, Amherst, Mass., '70
J. R. Shaver, East Lansing, Mich., '60
S. C. Shen, New York, N.Y., '60
S. Shostak, Pittsburgh, Pa., '70
J. Signoret, Caen, '67
M. Singer, Cleveland, Ohio, '69
K. I. Sirakami, Kôfu, '60
J. L. Sirlin, New York, N.Y., '60
Miss D. M. Skinner, Oak Ridge, Tenn., '70
F. Skoog, Madison, Wis., '70
N. Škreb, Zagreb,'60
O. Slabý, Plzeň, '64
F. Sládeček, Praha, '60
L. D. Smith, Lafayette, Ind., '69
R. W. Sperry, Pasadena, Calif., '64
M. Spiegel, Hanover, N.H., '64
A. A. Spirin, Moscow, '69
A. Spirito, Roma, '56
N. T. Spratt, Jr., Minneapolis, Minn., '56
D. Starck, Frankfurt, '52
A. Stefanelli, Roma, '52
M. S. Steinberg, Princeton, N.J., '69

Mrs. K. E. Stenger (Haffen), Nogent sur Marne, '64
Mrs. F. Stéphan (Dubois), Nancy, '60
H. Stern, La Jolla, Calif., '69
L. C. Stevens, Bar Harbor, Me., '69
L. S. Stone*, New Haven, Conn., '48
F. Strauss, Bern, '60
G. Strudel, Nogent sur Marne, '64
S. Subtelny, Houston, Tex., '69
H. Sugino, Osaka, '57
M. Sugiyama, Toba, '57
M. Sussman, Waltham, Mass., '69
G. Székely, Pécs, '69
K. Takata, Nagoya, '60
H. Takaya, Kobe, '57
P. Tardent, Zürich, '69
A. K. Tarkowski, Warszawa, '60
A. C. Taylor, Houston, Tex., '57
C. S. Thornton, East Lansing, Mich., '60
H. Tiedemann, Berlin, '60
C. A. du Toit, Stellenbosch, '60
S. I. Toivonen, Helsinki, '48
G. Töndury, Zürich, '48
H. A. L. Trampusch, Amsterdam, '56
R. L. Trelstad, Boston, Mass., '70
J. P. Trinkaus, New Haven, Conn., '60
H. Tuchmann-Duplessis, Paris, '56
P. H. Tuft, Edinburgh, '64
T. C. Tung, Peking, '48
Miss S. L. Ullmann, Glasgow, '70
E. Urbani, Roma, '56
H. Ursprung, Zürich, '69
L. C. A. Vakaet, Antwerpen, '60
G. Vandebroek, Louvain, '57
E. Vannini, Bologna, '56
W. S. Vincent, Pittsburgh, Pa., '60
E. P. Volpe, New Orleans, La., '70
O. E. Vyazov, Moscow, '60
C. H. Waddington, Edinburgh, '48
Mrs. S. Gluecksohn Waelsh, New York, '60
R. A. Wallace, Oak Ridge, Tenn., '69
A. J. Waterman, Bethesda, Md., '56
R. L. Watterson, Urbana, Ill., '56
R. Weber, Bern, '60
L. Weiss, Buffalo, N.Y., '69
P. A. Weiss*, New York, '48
L. J. Wells, Minneapolis, Minn., '60
B. S. Wenger, Saskatoon, Sask., '70
N. K. Wessells, Stanford, Calif., '69
J. A. Weston, Cleveland, Ohio, '70
A. H. Whiteley, Seattle, Wash., '57
J. R. Whittaker, Philadelphia, Pa., '70
Sir V. B. Wigglesworth*, Cambridge, Eng., '57
C. E. Wilde, Jr., Philadelphia, Pa., '57
B. H. Willier*, Baltimore, Md., '48
F. H. Wilt, Berkeley, Calif., '69
W. A. Wimsatt, Ithaca, N.Y., '56
E. Witschi*, New York, N.Y., '48
C. v. Woellwarth, Heiligenberg, '56
M. W. Woerdeman*, Amsterdam, prior to '33
Mrs. Em. Wolff (Hennig), Nogent sur Marne, '64
Et. C. Wolff, Nogent sur Marne, '48
L. Wolpert, London, '69
A. Wolsky, Tarrytown, N.Y., '60
T. Yamada, Oak Ridge, Tenn., '57
K. Yamamoto, Hakodate, '60
T. Yamamoto, Nagoya, '60
C. L. Yntema, Syracuse, N.Y., '48
Miss J. J. P. Zaayer, Leiden, '60
A. A. Zimmerman*, Houston, Tex., '56
J. Zwaan, Charlottesville, Va., '69
E. Zwilling, Waltham, Mass., '56

BOOK NOTICES

N.B. *These notices are descriptive rather than critical. Their aim is to provide an idea of the scope and potential usefulness of the books.*

Miscellaneous, general biology

1. BALTZER, F., 1967 — Theodor Boveri: life and work of a great biologist
2. KALMUS, H. (Edit.), 1966 — Regulation and control in living systems
3. KING, R. C., 1968 — A dictionary of genetics
4. KOROTKOVA, G. P., 1968 — Principles of integrity
5. RIEGER, R., A. MICHAELIS and M. M. GREEN, 1968 — A glossary of genetics and cytogenetics
6. SERRA, J. A., 1968 — Modern genetics, vol. 3

Instruction in developmental biology

General developmental biology

7. BELL, E. (Edit.), 1966 — Molecular and cellular aspects of development
8. BODEMER, C. W., 1968 — Modern embryology
9. EBERT, J. D., 1967 — Entwicklungsphysiologie
10. GUIDONI, P., 1968 — Embryologie
11. LEGHISSA, S., 1968 — Elementi di embriologia dei vertebrati e dell'uomo
12. SAUNDERS, J. W., Jr., 1968 — Animal morphogenesis
13. SIEWING, R., 1969 — Lehrbuch der vergleichenden Entwicklungsgeschichte der Tiere
14. WEISS, P. A., 1968 — Dynamics of development: experiments and inferences
15. WHITTAKER, J. R., 1968 — Cellular differentiation

Bio-medical and veterinary science

16. AUROUX, M., G. DAVID and P. HAEGEL, 1968 — Embryologie; travaux pratiques et enseignement dirigé, vols. 1 (2nd edit.) and 3
17. HEGRE, E. S., 1967 — A model atlas of the ten millimeter pig
18. MICHEL, G., 1968 — Embryologie
19. SOLÈRE, M., 1967 — Le cerveau primitif chez l'embryon humain de 34 jours
20. SOLÈRE, M., 1969 — Atlas d'embryologie humaine, vol. 1
21. THOMAS, J. B., 1968 — Introduction to human embryology
22. WANG, H., 1968 — An outline of human embryology

Research in developmental biology

General developmental biology

23. ADOLPH, E. F., 1968 — Origins of physiological regulations
24. AUSTIN, C. R., 1968 — Ultrastructure of fertilization
25. BULLOUGH, W. S., 1967 — The evolution of differentiation
26. EMELIANOV, S. V. (Edit.), 1968 — The tempo of individual development of animals and its changes during evolution
27. ETKIN, W. and L. I. GILBERT (Edits.), 1968 — Metamorphosis; a problem in developmental biology
28. FOULDS, L., 1969 — Neoplastic development

29. Ginsburg, A. S., 1968 — Fertilization in fishes and the problem of polyspermy
30. Hay, E. D. and J. P. Revel, 1969 — Fine structure of the developing avian cornea
31. Hörstadius, S., 1969 — The neural crest
32. Medvedev, Zh. A., 1968 — Molecular-genetic mechanisms in development
33. Polezhaev, L. V., 1968 — The loss and restoration of regenerative capacity in animal tissues and organs
34. Preda, V., 1969 — Developmental biochemistry of the vertebrate embryo
35. Rolnik, V. V., 1968 — Embryonic biology of bird development
36. Schmidt, A. J., 1968 — Cellular biology of vertebrate regeneration and repair
37. Schmidt, G. A., 1968 — The embryogenesis-types and their adaptative significance
38. Titova, A. K., 1968 — Development of receptor structures in the inner ear of vertebrates
39. Ursprung, H. (Edit.), 1968 — The stability of the differentiated state

Bio-medical research, including teratology

40. Assali, N. S. (Edit.), 1968 — Biology of gestation ,vols. 1 and 2
41. Bolande, R. P., 1967 — Cellular aspects of developmental pathology
42. Conrad, K. and others, 1969 — Handbuch der Urologie, vol. 1, Anatomie und Embryologie
43. Emery, J. L. (Edit.), 1969 — The anatomy of the developing lung
44. Franke, H., 1969 — Feinstruktur der Plazenta
45. Gommers, A., 1968 — Thyroide maternelle et développement prenatal du rat
46. Hertig, A. T., 1968 — Human trophoblast
47. Joffe, J. M., 1969 — Prenatal determinants of behaviour
48. Kalter, H., 1968 — Teratology of the central nervous system
49. Kobakova, E. M., 1968 — Nervous regulation of intestinal mobility in ontogenesis
50. Kreybig, Th. von, 1968 — Experimentelle praenatal-Toxikologie
51. Solcher, H., 1968 — Zur Neuroanatomie und Neuropathologie der Frühfetalzeit
52. Torpin, R., 1969 — The human placenta
53. Willert, H.-G. and H.-L. Henkel, 1969 — Klinik und Pathologie der Dysmelie

Symposium reports, etc.

General developmental biology

54. Cowdry, E. V. and S. Seno (Edits.), 1969 — Nucleic acid metabolism, cell differentiation and cancer growth
55. Locke, M. (Edit.), 1969 — The emergence of order in developing systems
56. Sigel, M. M. (Edit.), 1968 — Differentiation and defense mechanisms in lower organisms
57. Wolff, E. (Edit.), 1969 — Les interactions tissulaires au cours de l'organogenèse

Bio-medical research, including teratology

58. Bertelli, A. and L. Donati (Edits.), 1969 — Teratology
59. I A E A (Edit.), 1968 — Effects of radiation on cellular proliferation and differentiation
60. Jilek, L. and S. Trojan, 1968 — Ontogenesis of the brain

61. Lamming, G. E. and E. C. Amoroso (Edits.), 1967 — Reproduction in the female mammal
62. Shelesnyak, M. C. and G. J. Marcus (Edit.), 1969 — Ovum implantation
63. Teir, H. and T. Rytömaa (Edits.), 1967 — Control of cellular growth in adult organisms

Plant morphogenesis

64. Butenko, R. G., 1968 — Plant tissue culture and plant morphogenesis
65. Steward, F. C., 1968 — Growth and organization in plants
66. Wilkins, M. B. (Edit.), 1969 — The physiology of plant growth and development

1 THEODOR BOVERI
Life and work of a great biologist, 1862—1915
1967

By F. Baltzer
(translated by Dorothea Rudnick)
165 pp., 17 figs., 7 pls.

Univeristy of California Press
Berkeley - Los Angeles
Price: $ 6.—

This is the English translation of a book published in German in 1962. The very competent translator states in her translator's note that the main reason why she undertook this work was "the strong feeling that the present generation of American cell biologists has too little contact with the biological groundwork on which the exciting modern advances stand, especially with the German work and even more especially with that of Boveri." The final draft of the translation was prepared together with Prof. Baltzer in Berne. Some minor alterations were made from the German text. Otherwise, an attempt was made to retain the timbre of the original.

Those who already know the German book will agree that it is admirable, being both warmly human and thoroughly scientific. The book is in two parts, one describing the life and personality of Boveri, and the other discussing his contributions to cytology, embryology, and the study of heredity.

The book is very well produced and is illustrated with 6 photographic portraits and 17 line drawings reproduced from Boveri's publications. It contains a complete bibliography of Boveri's publications as well as a list of publications issued from the Zoological Institute at Würzburg during his Professorship (1893—1915). There is also a glossary and a combined author and subject index.

2 REGULATION AND CONTROL IN LIVING SYSTEMS
1966

Editor: H. Kalmus
468 pp., 137 figs., 5 tbs.

John Wiley & Sons
London - New York - Sidney
Price: $ 13.75

Contributors: Bell (London), Blest (London), Brown-Grant (Oxford), Free (Harpenden, Herts.), Fry (London), Kalmus (London), Lewis (London), Newth (Glasgow), J. Maynard Smith (Brighton), S. Maynard Smith (Brighton), Wilkie (London), Wilkins (London), Wynne-Edwards (Aberdeen)

The direct significance of this book for developmental biologists is limited, because the field covered is extremely broad, encompassing such vastly different subjects as regulation and control in engineering, molecular regulation in the cell, physiological control mechanisms, and regulation in animal societies and populations, to mention but a few.

The 16 chapters of the book are grouped in five sections, entitled respectively "Principles and methods", "Cells and individuals", "Development and genetics", "Groups and populations", and "Conclusions". Three of the four chapters in section III may be mentioned specifically. The first is by J. S. Wilkie and is entitled "Early studies of biological regulation: an historical survey" (30 pp.). In it most of the attention goes to the work of Réaumur, Trembley, Bonnet, and Roux. The two other chapters are by P. R. Bell and D. R. Newth respectively, and deal with regulation of plant growth (23 pp.) and with regulation in animal development (15 pp.). The latter chapter in particular is very thoughtful, and poses several important problems clearly and succinctly, although it refrains from going into details, and is not illustrated.

The book is illustrated predominantly with diagrams, and has author and subject indexes.

3 A DICTIONARY OF GENETICS

1968

By R. C. King
292 pp.
(paper-bound)

Oxford University Press
New York - London - Toronto
Price: 34 s.

This book was conceived primarily for the use of beginning students. The selection of entries was obviously guided by pragmatic motives, i.e. by the aim of elucidating those terms that are commonly encountered in genetical literature, whether they be of a strictly genetic or of a more general nature. The book contains, at a rough estimate, some 3,500 to 4,000 entries, but a large proportion of these are non-genetic and relate to other fields of science such as botany, zoology, taxonomics, palaeontology, endocrinology, (bio)-chemistry, and physics.

The definitions are usually brief. No literature is given. Chemical formulas, charts, and simple diagrams are provided wherever needed. The book is concluded by an appendix containing a chronology of historical events bearing on genetics, a list of periodicals, a list of laboratories in North America engaged in human genetics research, and a listing of teaching aids for genetics available in the U.S.A.

(See also review no. 5 below)

4 PRINCIPLES OF INTEGRITY

(On the problem of correlation in living and non-living systems)

1968

By G. P. Korotkova
162 pp., 13 figs., 2 tbs.
(paper-bound)

Leningrad
Leningrad University

This book is written in Russian and is announced only briefly. It is an essay on biological organization. The author is an associate of Prof. B. P. Tokin, Department of Embryology, Leningrad University. The following condensation of the table of contents may provide an idea of the nature of the book: Integral systems and their classification; the concept of "ideal" integrity; some general concepts characteristic of integrity (symmetry, polarity, differentiation, integration); comparison of systems with regard to their integrity; entropy, information, and integrity; isomorphic transformation of integrity (parallelism).

The bibliography covers six pages and gives much Russian literature, mostly recent to very recent.

5 A GLOSSARY OF GENETICS AND CYTOGENETICS

By R. Rieger, A. Michaelis and M. M. Green
507 pp., 90 figs., 6 tbs.

Springer-Verlag
Berlin - Heidelberg - New York
Price: DM 66.—; $ 16.50

This is the completely revised English version of an originally German book that first appeared in 1954, and was revised in 1958. The new book is printed on the same format and in the same type as the previous edition; it is about one fourth shorter, and contains about 2,500 entries, as against about 4,000 in the 1958 edition. Taking into account that the latter contained little information relative to molecular and microbial genetics, which are now well represented, it follows that a considerable amount of material was eliminated for the present edition.

The aim of the writers has been to provide material suitable both for students and research workers. Many terms are described at some or even considerable length, while quite a few descriptions refer to experimental data and appropriate literature. Cross-referencing is very extensive. The authorship of terms is meticulously recorded. Wherever necessary good illustrative material is provided. The bibliography covers more than 40 pages.

6 MODERN GENETICS
Vol. 3
1968

By J. A. Serra
792 pp., 119 figs., 19 tbs., 3 pls.

Academic Press
London - New York
Price: $ 27.50; 168 s.

This is the final volume of a book of which the first two volumes appeared in 1964 and '66 respectively, and were reviewed in the two previous main issues of Gen. Embryol. Inf. Serv. (1965 and '67).

The present volume is in three parts, dealing consecutively with cytoplasmic inheritance and cytoplasmic changes; nuclear treptions and mutations, genetic units; and, finally, with sex determination and life cycles. Both the first and third part contain material that is of interest to development biologists. In the first, this is particularly the chapter on interspecific hybrids (16 pp.), and in the third, that on sex determination in vertebrates (45 pp.) (the only case in which much is known about the action of the sex genes by way of the hormonal system).

In the extensive bibliography the most recent titles date from 1965. The book is concluded by author and subject indexes.

7 MOLECULAR AND CELLULAR ASPECTS OF DEVELOPMENT
1966 (first printing)

Editor: E. Bell
525 pp., 400 figs., 59 tbs.

Harper & Row
New York - Evanston - London
J. Weatherhill, Inc., Tokyo
Price: 32 s.

This book, first published in 1965, is still probably the best available "book of readings" in developmental biology. The American edition was reviewed in Gen. Embryol. Inf. Serv. 11, 1965, p. 341. The present edition is a photo-offset facsimile reproduction on a slightly reduced format.

The advantage of this technique of reproduction is that the price of the

book is considerably reduced, at least for countries outside the U.S.A. A disadvantage is that the quality of the photographic illustrations has suffered. They are on the whole much more smudgy than the original ones, which had been reproduced with the utmost care. Otherwise the production of the book is quite satisfactory.

8 MODERN EMBRYOLOGY

1968

By C. W. Bodemer
475 pp., 327 figs., 3 tbs.

Holt, Rinehart & Winston, Inc.
New York - London
Price: $ 9.95; 95 s.

This text-book is essentially an elaborated version of L. G. Barth's "Embryology" (2nd edition, 1953), but seen from another point of view it is an entirely new book. The text has been rewritten almost entirely, although occasionally and original paragraph is recognizable. The basic plan of the book has remained unaltered, but a wealth of new material has been smoothly integrated into the old text, while some of the old material has been considerably reshuffled, and an entirely new chapter on nucleo-cytoplasmic interactions added. The new book thus truly reflects the advances made during the last 15 years.

For those who have never used Barth's book, a quotation from the present book's preface may clarify its nature:

> "*Modern Embryology* is designed as a brief introduction to the general principles of embryology and a survey of developmental anatomy and physiology. In its preparation the guiding policy has been to present without excessive embroidery the factual and theoretical material necessary for an understanding of embryonic development and an appreciation of developmental biology. It is intentionally not encyclopedic in character, although the advanced student may find it useful as a survey of developmental processes."

One of the differences with Barth's book is the inclusion of brief lists of selected readings at the end of each chapter, and of a fairly extensive bibliography at the end of the book. Although in itself this is well-balanced, it is a pity that no references are made to it in the text, particularly since the use of authors' names in the text is rather inconsistent.

A major feature of the book are its illustrations. Most of the figures from Barth's book were redrawn, but whereas the old figures were sometimes characterized by a certain crudity, the new versions are both didactically and esthetically highly satisfactory. The use of various shades of colour has contributed greatly to this end. Moreover, more than 80 new photographs were included, and these are beautifully reproduced. Another good feature of the book is a well-balanced glossary of anatomical, embryological, and general biological terms, prepared by Dr. Dorothea Rudnick. Printing and lay-out of the book are modern in the best sense of the word.

9 ENTWICKLUNGSPHYSIOLOGIE

1967

By J. D. Ebert
Serie Moderne Biologie
230 pp., 130 figs.
(paper-bound)

Bayer. Landwirtschaftsverlag
München - Basel - Wien

This is the German translation of one of the best brief introductions to developmental physiology available ("Interacting systems in development"). The original book appeared in 1965, and thus is still largely up to date. It has been received very well (for a brief review see Gen. Embryol. Inf. Serv.

11, 1965, p. 338), and there is thus good reason for making it available to German-speaking students in their own language. Unfortunately, however, the translation is far from ideal; although the translator is obviously a biologist, he is apparently not a specialist in this particular field, so that sometimes important shades of meaning are lost, and occasionally outright mistakes are made. Similar mistakes have crept into several figure legends.

The original illlustrations are well reproduced. For some reason the original reading lists at the end of each chapter were replaced by a general reading list at the end of the book. This contains a number of German titles not quoted originally; some of these are completely irrelevant to the subject of the book. The alphabetical index is much shorter than the original one and does not contain authors' names.

10 EMBRYOLOGIE
1968

By P. Guidoni
488 pp., 477 figs.
(paper-bound)

Doin, Deren & Cie.
Paris
Price: F 75.—

This book lacks a preface stating the author's aims in writing it. One gets the impression that it is based on lectures. The book essentially deals with the descriptive and comparative embryology of vertebrates and man. Its organization is conventional, with a first part discussing embryogenesis, and a second part dealing with organogenesis, arranged by organ systems. The first part contains a brief and very superficial chapter on experimental embryology and a very sketchy summary of congenital malformations, while the second part is concluded by a summary of genetics, which completely neglects the subject of developmental genetics. Another neglected subject is the relationship between embryology and evolution.

The book is illustrated with simple line drawings. Many of these are schematized to the point of being completely unrealistic. They are the kind of drawing used to illustrate a lecture, but most of them are inadequate for a text-book. The book gives no literature and lacks a subject index.

In conclusion, the book might have its uses in connection with specific courses, but certainly cannot be recommended as a general text-book of embryology. It is moreover much too expensive.

11 ELEMENTI DI EMBRIOLOGIA DEI VERTEBRATI E DELL' UOMO
1968

By S. Leghissa
447 pp., 285 figs., 20 tbs., 4 pls.

Unione Tipografico-Editrice Torinese
Price: L 12.500

As far as we are aware this seems to be the first original text-book of vertebrate embryology in Italian and as such it will be welcomed by many students and teachers of biology and medicine in Italy. The treatment is almost exclusively descriptive and comparative; classical experimental data are only mentioned cursorily in connection with primary induction and twinning, while biochemical and genetical aspects are hardly mentioned at all except in the brief historical introduction.

The organization of the book is conventional; the first part deals with reproduction and with general embryology from gametogenesis up to the end of embryogenesis; part two discusses the morphogenesis and different-

iation of the various organ systems. At the end of part one a brief chapter is devoted to twinning and to the most common developmental anomalies.

The book is profusely illustrated with photographs and drawings, whose quality is on the whole reasonable to good. Many figures were redrawn by the author; some of these are highly schematized and sometimes executed in rather crude techniques; the labelling is not always very clear. The book is well printed. It has a fairly extensive bibliography, as well as author and subject indexes.

12 ANIMAL MORPHOGENESIS
1968

By J. W. Saunders Jr.
Current Concepts in Biology Series
118 pp., 67 figs., 2 tbs.
(paper-bound)

The Macmillan Comp., New York
Collier-Macmillan Ltd., London

In reviewing this new paperback it is perhaps useful to contrast it with a companion volume in the same series that appeared two years earlier: C. H. Waddington, "Principles of development and differentiation", 1966 (reviewed in Gen. Embryol. Inf. Serv., Suppl. 11, 1966, p. 13). Both books are intended for beginning biology students, and both are elementary in scope. The organization of the present book is more conventional, the style perhaps less personal; it is much more a miniature text-book of embryology, with much emphasis on morphology, but for this very reason it is more suitable as a basis for further study of embryology proper. And it must be said that as such it is exemplary, both as regards content and illustrations (the quality of the latter being much higher than in the earlier book). The treatment proceeds step by step, logically and clearly, and is at the same time completely up to date. Particularly the last chapter, discussing the genetic control of development and the epigenetic control of morphogenesis, is admirable in its readability and its selection of examples.

All line drawings are either original or redrawn; and all are beautifully executed. Many photographs are also included. All figures have explanatory legends. There is a good reading list and a detailed alphabetical index.

13 LEHRBUCH DER VERGLEICHENDEN ENTWICKLUNGS-GESCHICHTE DER TIERE
1969

By R. Siewing
531 pp., 196 figs., 2 tbs.

Verlag Paul Parey
Hamburg - Berlin
Price: DM 58.—

Contents: I. Einleitung; II. Furchung; III. Keimblätterentwicklung; IV. Organdifferenzierung; V. Entwicklung der Keimzellen; VI. Entwicklung der Körperform; Metamerie; VII. Umwege in der Ontogenetischen Entwicklung

This text-book of comparative animal embryology is the first in the German language since the classical handbook by Korschelt and Heider (1936), not counting the book by Starck (1955/65), which uses a quite different approach. The present book is on a more modest scale than that by Korschelt and Heider, but is much more balanced in its treatment of invertebrates and vertebrates together. The approach is strictly morphological, with much emphasis on phylogenetic relationships. The book was primarily written for the use of students of biology, medicine, and veterinary science, and the author consequently has not aimed at anything approaching an exhaustive treatment of this vast subject.

The organization of the book is rigorously logical, and the style is clear. It is impossible to review the book in detail: this will be the task of specialists in the field. One thing may be mentioned: the book opens with a chapter devoted exclusively to theoretical aspects, such as the methods of comparative embryology, criteria of homology (Remane), the biogenetic law (recapitulation theory), the "biometabolic modes" (Osche), and questions of terminology.

The book is exceedingly well produced, and illustrated with numerous beautiful line drawings. Many of these are original, but the ones taken from other sources were all redrawn, leading to a very satisfactory unity of style. The bibliography is restricted to important works. The book is concluded by an author index and a detailed subject index.

14 DYNAMICS OF DEVELOPMENT: EXPERIMENTS AND INFERENCES

Selected papers on developmental biology
1968

By P. A. Weiss
624 pp., 133 figs., 2 tbs., 4 pls.

Academic Press
New York - London

In this book the author has brought together 24 of his papers so far scattered over a variety of media, some of which are not easily accessible. As he says in his foreword, his main motive in making this compilation has been that he considers "the cardinal function of these papers in their conjunction to be their contribution to the emergence of a unified understanding of the dynamic order of living systems." Major features of Weiss' writings produced during half a century have been, first, the conviction that the problems of development should be approached from many directions, and secondly the continuous effort to fill theoretical concepts with more concrete meaning.

The papers have been grouped into five sections, entitled respectively "On basic principles", "On differentiation", "On growth and aging", "On form and formative processes", and finally "On the dynamics of the nervous system". Within each section the order of the papers is logical rather than chronological.

The papers are reproduced in facsimile, complete with the original illustrations and running titles (the latter sometimes being meaningless in the context of this book). Three papers bear no date of publication; the rest date from as far back as 1933 until 1967.

The book is concluded by a brief topical index referring to chapters.

15 CELLULAR DIFFERENTIATION

1968

By J. R. Whittaker
Dickenson Ser. on Contemp. Thought in Biol. Sci.
112 pp., 52 figs., 21 tbs., 2 pls.
(paper-bound)

Dickenson Publishing Cy., Inc.
Belmont, Calif.
Price: 21 s.; $ 2.50

This booklet forms part of a series of "books of reading". The aim of the series is to confront the student right from the beginning with significant original publications in a given field. The eleven papers in the present volume represent a well-balanced choice, highlighting significant aspects of the problem of differentiation. They are grouped in four sections, each with a

brief introduction by the editor, which places the papers in the proper perspective. The majority of the papers deal with animal material; one each bears on plant material, bacteriophages, and bacteria, respectively.

The four sections are entitled respectively: "The multipotential genome" (papers by Gurdon and Uehlinger, Vasil and Hildebrandt, and Moscona), "Selective gene expression" (papers by Edgar and Wood, F. Jacob and J. Bonner), "Egg cell organization" (papers by Morgan and Spooner, and Curtis), and "Cell interactions: physical and chemical" (papers by Trinkaus, Grobstein, and J. J. Gilbert). The two longest papers cover 14 pages each; all but one date from the years 1957—1966; that by Morgan and Spooner dates from 1909. The paper by Gilbert on trans-generic induction of spines in rotifers, although it is indeed delightful, seems a little out of place in a small collection like this.

The papers are reprinted in uniform type. The photographic illustrations are reproduced as such, but the other figures have all been redrawn, unfortunately with little care. The editor has added a few explanatory diagrams and drawings. The book is concluded by a brief list of further reading.

16 EMBRYOLOGIE

Travaux pratiques et enseignement dirigé
Vol. 1 (2nd edit., 1968)
Vol. 3 (1968)

Vol. 1 by G. David & P. Haegel
114 pp., 226 figs.
Vol. 3 by M. Auroux & P. Haegel
146 pp., 257 figs.
(paper-bound)

Masson & Cie
Paris
Price Vol. 1: F 30.—
Price Vol. 3: F 38.—

In France embryology is at present taught to medical students in a three-year course. This series of three atlases has been designed to assist the student along with the practical courses given in Paris. The second volume was not available for review. The three volumes respectively deal with: (1) embryogenesis, (2) general organogenesis, and (3) development of the nervous system, sense organs, and endocrine glands.

The text of the atlases is brief, the emphasis being on the illustrations. These consist of photographs, drawings, and diagrams, all three types of illustrations being of superb quality. Colour is used judiciously in almost all drawings and diagrams. The organization of the books is didactically very clear. Adequate attention is given to developmental anomalies and to foeto-maternal relationships. Data from experimental and comparative embryology are briefly treated to clarify certain relationships.

The plan and execution of the series is such that teachers of human embryology in all countries might derive various new didactic ideas from them.

17 A MODEL ATLAS OF THE TEN MILLIMETER PIG

1967

By E. S. Hegre
546 looseleaf cards,
cut and bound

Med. Coll. of Virginia Book Store
Richmond, Va.
Price: $ 49.—

This is a very unusual "book". It consists of a stack of more than 500 cards, nearly 7 in. high; each card carries the image of a serial cross section of a 10 mm. pig embryo at a magnification of x 16; the sections are cut out so that one (lateral) half protudes beyond the border of the card; together all sections stacked in this way build up the surface relief of one half of the

embryo on the front plane of the stack, as in a wax plate reconstruction. The stack is held in place by two brass rods running through perforations and bent so that the cards can be turned back at will, as in a file. The rods are anchored in a wooden base and the stack is covered by a loose wooden "lid".

The author states that a prototype of the atlas became very popular with both students and instructors. The atlas has no text, but on "pages" 11—19 there is a key to external body features, to prominent internal structures (to be used as landmarks), and to the various organ systems and their parts; this key refers to "pages". On the "pages" themselves labeling is restricted to structures that are difficult to interpret or to localize.

The sections are photographic reproductions of rather poor quality, weak in contrast and showing little more than the minimum detail required to identify structures. The cards are made of rather soft board, and probably will soon get damaged with intensive use. Nevertheless, the atlas can be very useful as a visual aid in the teaching of embryology.

18 EMBRYOLOGIE
1968

By G. Michel
Komp. der Vet.-Anat. VI
363 pp., 211 figs., 15 tbs.

VEB Gustav Fischer Verlag
Jena
Price: MDN 24.10

Contents: Einleitung; Die Vorentwicklung, Progenese; Die Primitiventwicklung, Blastogenese; Die Plazentation; Die Entwicklung der Organe, Organogenese; Die Entwicklung des Harn- und Geschlechtsapparates; Die Entwicklung des Kreislaufapparates; Die Bildung der serösen Körperhöhlen und des Zwerchfelles; Die Entwicklung des Bewegungsapparates; Die Entwicklung der äusseren Haut einschl. der Hautorgane; Die Entwicklung des Nervensystems; Die Entwicklung der Sinnesorgane

This is a concise text-book of embryology for the use of veterinary students. Its concentrates on domestic mammals and birds, and devotes relatively much attention to aspects of reproduction, early development, and placentation that are of practical importance. Comparative and histological aspects are considered only briefly, while teratology has been left out of consideration.

The organization of the book is conventional. It is illustrated with numerous photographs and pen-drawings. The latter are for the greater part redrawn from varied sources, and are on the whole of good quality. Unfortunately most of the photographs are rather poorly reproduced. The book is concluded by a selective bibliography and a subject index.

19 LE CERVEAU PRIMITIF
CHEZ L'EMBRYON HUMAIN DE 34 JOURS
1967

By M. Solère
44 pp., 11 figs.
(paper-bound)

L'Expansion Scientifique Française
Paris
Price: F 10.—

This little book is the first of a series intended to assist the medical student in understanding the morphology of the human brain and sense organs. The series may also be of use to neurologists and neuroanatomists.

The book is a picture atlas based on a well-fixed and carefully processed human embryo of 34 days. It presents a wax reconstruction of the brain and 13 photographs of exactly symmetrical serial sections through the brain, whose levels are indicated on the wax model. Four other photographs supply

details of the hypophyseal and ocular rudiments, while a final one shows the structure of the wall of the future hemispheres. All figures are clearly labeled; they are accompanied by a concise explanatory text and an alphabetical index.

20 ATLAS D'EMBRYOLOGIE HUMAINE
Vol. I
1969

By M. Solère
120 pp., 82 figs.
(paper-bound)

Librairie Maloine S.A.
Paris
Price: F 28.—

This is the first volume of a new atlas of human embryology designed for the use of medical students at different stages of their curriculum. The later volumes will deal with the organogenesis of all the major organ systems. The present volume contains a brief survey of early development up to the stage of the flat three-layered embryo, and further concentrates on the longitudinal and transverse delimitation of the embryo, on the formation of the median digestive tube, and on the early extra- and intra-embryonic circulation and its relationship with the endodermal structures. The whole study is based on carefully preserved and meticulously sectioned embryonic material present at the Broussais Medical Faculty in Paris.

The most important constituents of an atlas are its plates. In this case these consist of diagrams and photomicrographs, which are both of very good quality. The text is restricted to explanations of the plates. The diagrams are highly schematized and not intended to be realistic, but they are remarkably clear and uniform in style. The photographs are mostly superb, and wherever necessary they are clarified by diagrams. The utmost care has been devoted to the labeling of all illustrations.

Details such as the formation of the bile ducts and the subdivision of the cloaca are well represented. The formation of the intestinal loop in the yolk stalk, and the fate of the cloaca are presented on the basis of new concepts emerging from the author's own research. The authors of older concepts are mentioned, but literature references are lacking.

The book is very well printed; the typography is somewhat obtrusive, but no doubt effective from a didactic point of view. The book is concluded by a subject index.

21 INTRODUCTION TO HUMAN EMBRYOLOGY
1968

By J. B. Thomas
348 pp., 82 figs., 2 tbs.

Lea & Febiger
Philadelphia
Price: $ 12.50

This book is not meant to be "another text-book of embryology"; the author's aim has been to describe human prenatal development within a broad frame of reference, and particularly to integrate it with data that classically belong to the domain of obstetrics: the diverse reactions of the maternal organism. Incidentally, for this very reason the choice of the title seems unfortunate. The approach chosen has entailed a chronological treatment instead of the usual systematic one. While this may not appeal to the true embryologist, it has the advantage that the story of prenatal development is a more or less continuous one, which goes hand in hand with the corresponding story of pregnancy.

Characteristically, the book opens with a chapter on puberty. After descriptions of the male and female reproductive systems, a chapter by

A. J. Enelow follows, entitled "The psychological impact of pregnancy on the family". From then on, the treatment is strictly chronological, encompassing successively the first through seventh weeks, the third through sixth lunar months, and finally the third trimester of pregnancy, and birth. All chapters have a brief summary of the main events. After the chapter on the seventh week a review of the embryonal period is inserted, which contains a summary of organogenesis arranged by organ systems. The book ends with a synopsis of the main abnormalities of development.

All illustrations were drawn especially for this book; unfortunately most of them are rather crude and unrealistic, while the labeling is not particularly clear. There is a list of further reading at the end of each chapter.

22 AN OUTLINE OF HUMAN EMBRYOLOGY

1968

By H. Wang
263 pp., 264 figs., 27 tbs.

William Heinemann Medical Books Ltd.
London
Price: 45 s.

This book is perhaps best characterized by a quotation from the preface:

> "I believe there is need for a short treatise on human embryology that will serve either as a textbook or as a reference book. The present volume is written with this purpose in mind. It tells the story of human developmental anatomy simply, directly, and to the point with as few details and as many illustrations as possible so that anyone who has had a course in Introduction to Biology would be able to follow".

The organization of the book is on the whole conventional. The style is fluent and serves to make the subject interesting to the medical student. Much use is made of schemes and tables facilitating comprehension and memorizing. Small print is used wherever necessary for interesting subsidiary information, and also to describe the most frequent anomalies of development. There is a brief but adequate chapter on experimental embryology and teratology, in which some attention is devoted to the role of genes in development. The endocrine organs are treated together in a separate chapter. The book contains a number of minor inaccuracies, but these will no doubt be weeded out in subsequent editions.

The numerous illustrations were especially prepared for this book, and with great success. They strike the correct balance between realism and abstraction required for the elucidation of a difficult subject. The book has a brief list of further reading, and a good subject index.

23 ORIGINS OF PHYSIOLOGICAL REGULATIONS

1968

By E. F. Adolph
147 pp., 32 figs., 5 tbs.

Academic Press
New York - London
Price: $ 7.50; 70 s.

The author of this monograph is Emeritus Professor of Physiology, University of Rochester (N.Y.). He has been actively engaged in investigations on physiological regulation for three decades or longer. Here is a physiologist who has turned to the developing organism in the hope of increasing his insight into the principles of regulation by studying its origins. He is not interested in development *per se;* nevertheless, his book is of great interest to developmental biologists, because it helps them to view the embryo as a self-contained, functioning organism. The book is intended for research workers and advanced students. The treatment is not exhaustive, but aims at uncovering general patterns by means of representative examples; the authors's style is highly personal.

It is impossible to review the 16 short chapters in detail. The author discusses the ontogeny of about 70 regulated activities, mostly in fetal and postnatal mammals, including man. The regulation of heart rate (pacemaker) serves as a model, on the basis of which other types of regulation are expounded. The dichotomy between programmed and triggered events is emphasized, as is that between intrinsic and extrinsic regulation. One chapter discusses the ontogeny of behaviour as a component of regulation. Another deals with comparisons between species as regards sequences of maturation.

The book is very well produced; it is illustrated mainly with diagrams and graphs, and is concluded by a subject index.

24 ULTRASTRUCTURE OF FERTILIZATION

1968

By C. R. Austin
Biology Studies Series
196 pp., 79 figs.

Holt, Rinehart and Winston
New York - London
Price: 56 s.

Although this book, written by an outstanding expert in the field, belongs to a series intended for students, it should be equally useful to research workers, particularly since it provides detailed procedural data. This is done by way of a separate chapter in which some 80 publications are listed with details of electron microscopic procedures used.

The main text is organized into five chapters, the first four of which deal respectively with sperm penetration through egg investments, fusion of conjugants and gametes, reactions of eggs to sperm penetration, and nuclear migration, development, and union. Each of these four chapters opens with a brief section providing the necessary biological background. The last chapter of the main text is a brief general discussion. Throughout the book material is drawn from both the animal and plant kingdoms. Much attention is devoted to problems of terminology.

In a book like this the illustrations are obviously of the greatest importance. Considering that they are printed on ordinary paper, it is surprising how well they have come out. Some very good line drawings are also included. The book has a 13-page bibliography and is concluded by author and subject indexes. Its price seems excessive.

25 THE EVOLUTION OF DIFFERENTIATION

1967

By W. S. Bullough
206 pp., 32 figs.

Academic Press
London - New York
Price: $ 9.50; 45 s.

Contents: 1. Introduction; 2. The simplest living organisms: bacteria; 3. Unicellular plants and animals; 4. Tissue and organ formation; 5. Tissue homeostasis; mass and function; 6. Tissue homeostasis: hormones; 7. Carcinogenesis; 8. Summary

This essay is a successful attempt to synthetise a wealth of recent data bearing on differentiation and gene control. The author has worked for several decades on problems of mitotic control in mammalian tissues, and, incidentally, views mitosis as a special case of differentiation.

The information reviewed ranges from the more labile chemical control of the genetic mechanisms of unicellular organisms to the chemical control of more stable differentiation in multicellular organisms, both during embryonic development and in the adult state (including ageing). A final chapter deals with the cancer problem. The final conclusion of the book is that the "evolution of cellular differentiation, dramatic as its consequences have been, has involved nothing more than an increasing elaboration of an ancient

theme of gene control that may have originated in some primitive prokaryote cell". Much in the book is of a speculative nature, but certainly all of it is highly thought-provoking.

Chapters 2—7 all have more or less speculative but lucidly written concluding sections. Chapter 8 is a summary of the more theoretical aspects of the problem; in its final section, entitled "Chemical messengers: the new endocrinology", the author argues that all chemical substances involved in homeostasis, ranging from repressors, through effectors and hormones proper, to pheromones, belong to one single domain of biology.

The book is well printed and illustrated with good drawings and diagrams. It has a 22-page bibliography and is concluded by a subject index.

26 THE TEMPO OF INDIVIDUAL DEVELOPMENT OF ANIMALS AND ITS CHANGES DURING EVOLUTION

1968

Editor: S. V. Emelianov — Publishing House „Nauka" Moscow

287 pp., 48 figs., 22 tbs.

Contributors: Arshavsky, Baevsky, Bogoljubsky, Bogomolov, Emelianov, Koshelev, Lebedeva, Matveiev, Persov, Petskoy, Sharov, Sleptzov, Spet, Sytina, Waguin, Zusman

This book is written in Russian and is announced only briefly. It contains a series of 16 papers by Russian workers who are investigating the problem of the rate of individual development in relation to the role of heterochrony in evolution. All but one of the papers are morphological in character. Most studies concentrate on the effects of external conditions on development, particularly during artificial breeding. Three papers deal with invertebrates, the remainder with various vertebrate groups.

27 METAMORPHOSIS

A problem in developmental biology

1968

Editors: W. Etkin and L. I. Gilbert — North Holland Publ. Co., Amsterdam; Appleton-Century-Crofts, New York

459 pp., 98 figs., 18 tbs. — Price: H.fl. 55.—

Contents: Metamorphosis in crustaceans (J. D. Costlow, Jr.); Metamorphic changes in insects (J. Whitten); Control of hormone production in insects (W. S. Herman); Biochemistry of insect metamorphosis (G. R. Wyatt); Gene activities during insect metamorphosis and their control by hormones (H. Kroeger); Metamorphosis in lower chordates (E. J. W. Barrington); Survey of amphibian metamorphosis (J. N. Dent); Hormonal control of amphibian metamorphosis (W. Etkin); Biochemistry of amphibian metamorphosis (E. Frieden); Nature of hormone action in amphibian metamorphosis (J. C. Kaltenbach)

According to the editors' preface, this book is the first "single up-to-date source that deals with the several aspects of metamorphosis in an integrative way". It is equally well suited for students and research workers. All contributors are outstanding authorities in their respective fields. The problems of metamorphosis are discussed from the viewpoints of morphology, physiology, endocrinology, and biochemistry.

The chapters range in size from about 35 to about 60 pages, and are all well organized. Each has its own bibliography. With few exceptions, the most recent literature cited dates from 1966. The book is produced in offset print. It is well illustrated with many line drawings and graphs, and a few photographs. It is concluded by author and subject indexes. As far as taxonomic names are concerned, no attempt at unification has been made (for instance, the axolotl appears in the subject index under three different names).

28 NEOPLASTIC DEVELOPMENT
1969

By L. Foulds
439 pp., 70 figs.

Academic Press
London - New York
Price: 110 s.; $ 16.50

The author of this book has been active in cancer research for nearly four decades and has thought deeply about cancer and its relationship to normal development. To quote from his preface "the unifying principle used in this book is the concept of neoplasia as a *developmental process* akin to normal development in some respects but differing from it in important particulars that are not yet well-defined. The emphasis is on the pathology of neoplasia as an epigenetic process and not on the pathology of tumours as lumps". The result is an extremely interesting book, well-balanced, rich in content, and full of original thought, which should be of value to the specialist as well as to the general and developmental biologist.

The book is in three parts, entitled respectively "Historical introduction", "General and experimental pathology of neoplastic development" (6 chapters), and "Biological organization and developmental biology" (8 chapters). Although part II contains much that is of interest to the embryologist, we will focus our attention on part III. This is devoted to a consideration of the extent to which current knowledge and ideas about biological organization and development can provide a suitable terminological and conceptual machinery for dealing with the facts and problems emerging from part II. In fact, the current ideas in question are set forth so clearly that this part could serve as an excellent introduction to this area in its own right. Recent advances in molecular biology and in the application of cybernetics to the problems of development are emphasized throughout. Examples are mainly drawn from unicellular organisms and vertebrates. The careful definition of some new terms and the critical re-evaluation of earlier concepts of other authors are particularly welcome. This holds especially for the author's attempt to clear up the terminological confusion with regard to the concept of differentiation, and for the emphasis he places on competence as the necessary counterpart of induction.

The author is apparently unaware of the recent work of Hadorn and his group on transdetermination in insect imaginal discs cultured *in vivo*.

The illustrations, mainly very good photographs, are almost entirely in part II. The book has a 38-page bibliography and author and subject indexes, of which the latter could have been more detailed.

29 FERTILIZATION IN FISHES AND THE PROBLEM OF POLYSPERMY
1968

By A. S. Ginsburg
358 pp., 68 figs., 38 tbs., 16 pls.

Publishing House „Nauka"
Moscow

Contents: 1. The egg; 2. The spermatozoon; 3. Sperm-egg association; 4. The number of spermatozoa penetrating the egg at fertilization, and the fate of supernumerary spermatozoa; 5. The cortical reaction in physiologically monospermic eggs of fishes and other animals; 6. The mechanism of the block to polyspermy.

This book is written in Russian and is announced only briefly. It is very comprehensive as far as the fishes are concerned, while examples from other classes and phyla are adduced for comparative purposes wherever necessary. The book has an English table of contents and a brief English summary. It is well illustrated; most of the photographic illustrations are brought together

as plates at the end of the book; many of these are electron micrographs. The bibliography covers 46 pages, nine of which are devoted to Russian titles; many of these are recent.

30 FINE STRUCTURE OF THE DEVELOPING AVIAN CORNEA

1969

By E. D. Hay and J. P. Revel
Monographs in Developmental Biology, vol. 1
144 pp., 48 figs.

S. Karger
Basel - New York
Price: $ 7.70

This is the first volume of a new series of monographs in developmental biology edited by A. Wolsky and P. S. Chen. The authors of this volume have carried out extensive electron microscope studies on the role of extracellular matrices in epithelial-mesenchymal interactions, first in regenerating amphibian limbs and later in the chick cornea system. They are now presenting a complete ultrastructural study of the development of this system. The book will be of interest to embryologists, cytologists, and ophthalmologists (to the latter especially because the major developmental events in the avian and mammalian cornea appear to be very similar, at least when studied with the light microscope).

The book opens with a general outline of corneal development based mainly on the older light microscope literature. Then follows a chapter on the formation of the primary stroma and the role of the ectoderm, and a chapter on the origin of the endothelium and the formation of the "Brille". After a chapter discussing the later events up to hatching, the book is concluded by a summary and concluding remarks. The descriptive parts are based on the Hamburger-Hamilton series of stages. All chapters except the last have their own introduction and brief summary.

Points of wider interest discussed in the various chapters are: secretion of connective tissue proteins by epithelia; the difference between vascular mesenchyme and mesenchyme proper; the phylogeny of the dermis and corneal stroma. The last chapter deals again with the developmental events, this time not chronologically but for the three tissue components separately (epithelium and primary stroma; endothelium; fibroblasts and definitive stroma), and finally discusses epithelial-mesenchymal interactions as illustrated in particular by the developing cornea.

An appendix describes in detail the methods used in this study, and gives illustrations of the external form of the most important relevant Hamburger-Hamilton stages.

The book is beautifully produced and profusely illustrated, mostly with superb electron micrographs. It is concluded by a nine-page bibliography.

31 THE NEURAL CREST

Its properties and derivatives in the light of experimental research

1969

By S. Hörstadius
111 pp., 46 figs.

Hafner Publishing Comp.
New York - London
Price: $ 6.50

This is a facsimile reprint of a monograph first published in 1950. The original book is so well known that it is superfluous to review it here, particularly since no changes or additions have been made. Suffice it to say that the book has been reproduced with the utmost care.

32 MOLECULAR-GENETIC MECHANISMS IN DEVELOPMENT

1968

By Zh. A. Medvedev
268 pp., 107 figs., 5 tbs.

Publishing House "Meditsina"
Moscow

Contents: 1. Elementary processes in morphogenesis: biosynthesis of information-macromolecules; biochemical mechanisms of genetic information transfer; 2. Molecular-genetic mechanisms of reproduction and morphogenesis in viruses; 3. Molecular-genetic mechanisms of morphogenesis and intercellular biochemical differentiation of monochromosomal bacterial cells; 4. Molecular-genetic cybernetic systems in morphogenesis and differentiation of multicellular organisms. The molecular structure of the nuclear chromosomes and structural-biochemical features of genetic and functional differentiation of chromosomes; 5. Biochemical realisation of the genetic program of morphogenesis. Changes in proteins and nucleic acids in differentiative and developmental processes; 6. Chromosomal proteins and their role in the regulation of the selective activity of genes in differentiation processes and in specialised cells; 7. Induction of the differential activity of genes by cytoplasmic and chromosomal factors and its role in general morphogenetic organization; 8. Molecular mechanisms of the programming of morphogenesis and differentiation. Theoretical analysis

This book is written in Russian and is announced only briefly. The author's earlier book "Protein biosynthesis and problems of heredity, development and ageing" was published in English translation in 1966 (see review in Gen. Embryol. Inf. Serv. 12, 1967). The translated chapter headings given above sufficiently characterize the contents of the present book. The bock is well illustrated. Each chapter has its own bibliography; a relatively small proportion of the references are in Russian, but most of these are recent to very recent.

33 THE LOSS AND RESTORATION OF REGENERATIVE CAPACITY IN ANIMAL TISSUES AND ORGANS

1968

By L. V. Polezhaev
326 pp., 123 figs., 1 tb.

Publishing House "Nauka"
Moscow

This book is written in Russian and is announced only briefly. It is in three parts, viz. a theoretical introduction on regeneration generally, a part discussing experimental research on the restoration of regenerative capacity in a variety of animals, organs, and tissues, and a part presenting general conclusions (including chapters on immunity and on neoplastic development). The bibliography covers 37 pages and contains about 60 % Russian titles, many of which are recent to very recent.

34 BIOCHIMIA DEZVOLTARII EMBRIONARE LA VERTEBRATE

(Developmental biochemistry of the vertebrate embryo)

1969

By V. Preda
274 pp.

Academiei Republicii Socialiste România
Bucuresti

This book is written in Rumanian and is announced only briefly. The author is Professor of Biology at the Medical-pharmaceutical Institute in Cluj. The first five chapters deal in a systematic way with the biochemistry of various classes of substances during embryonic development in all vertebrate classes. The following substances are discussed: carbohydrates, lipids, nucleic acids, proteins, and enzymes. Other major chapters are devoted to

oxidative breakdown and energy production, and to the biochemical basis of differentiation.

The book is not illustrated and contains no graphs. The bibliography contains more that 1,500 publications, without titles; a small but significant proportion of these are by Rumanian and other Eastern-European authors.

35 EMBRYONIC BIOLOGY OF BIRD DEVELOPMENT

1968

By V. V. Rolnik
424 pp., 58 figs., 52 tbs.

Publishing House "Nauka"
Leningrad

This book is written in Russian and is announced only briefly. It is in three parts, the first of which deals with the egg and embryonic development prior to incubation, the second with the morphology and physiology of embryonic development during incubation, and the third with the role of exogeneous factors (temperature, humidity, ventilation, etc.) in embryonic development. There is a very extensive bibliography (40 pp. continuously printed), which contains about 50 % Russian titles; much of the literature cited is recent to very recent.

36 CELLULAR BIOLOGY OF VERTEBRATE REGENERATION AND REPAIR

1968

By A. J. Schmidt
420 pp., 117 figs., 10 tbs.

University of Chicago Press
Chicago - London
Price: 112 s.

The author of this book has been actively engaged for more than ten years in the study of amphibian limb regeneration. The main theme of the book centers on the cytoarchitecture and molecular ecology of (adult) amphibian appendage regeneration. The data from this field are compared with tissue responses to injury and subsequent repair in other vertebrates, with special emphasis on wound healing.

Since much of the discussion centres around the limb regeneration blastema, it is important to note that the author holds the view that the blastema does not consist of pluripotential, "embryonic" cells, but that regenerating tissues retain their previously determined genetic information for development. In his opinion redifferentiation is no more than modulation as defined by Weiss (1939). Only the skeleton and related connective tissues would be derived from true blastema cells, whereas all other tissues would have their origins in the homologous tissues of the stump.

Most of the book is about activities and interactions at the cellular level, both in the epithelium and mesenchyme. The problem of pattern formation and polarity determination in the regenerating limb is merely grazed here and there, and most of the admittedly scanty information that is available on this problem is omitted from the discussions and literature references. On the other hand, the book contains a wealth of information on the cellular biology of the process, and as such is the first really comprehensive survey of this aspect of vertebrate regeneration ever written by a single author.

The book is in three main parts, the first of which is mainly descriptive and, apart from an introduction and a brief chapter on cutaneous wound healing, deals entirely with the regenerating (adult) amphibian appendage. Part two deals with metabolites and metabolism in repair and regeneration, and has chapters on carbohydrates, lipids, nucleic acids, proteins, and en-

zymes. The last of these gives information on 13 hydrolases, 9 oxidoreductases, and three enzymes of other classes. Part three is on systemic and local factors in repair and regeneration, mainly hormones (pituitary, adrenocortical, thyroid, and gonadal), but also temperature, bioelectricity, vitamins, and other biological stimulators. The last chapter of the book is a summary in which some attention is devoted to the possible improvement of regeneration in higher mammals and man in connection with surgery.

The book is illustrated with an abundance of well-chosen figures, mostly photomicrographs and electron micrographs, both original and taken from other sources. Their reproduction is reasonable to good. The bibliography covers close to 100 pages. The subject index could have been more detailed, since the book will frequently be used as a work of reference. For the same reason it is a pity that an author index is lacking.

37 THE EMBRYOGENESIS-TYPES AND THEIR ADAPTATIVE SIGNIFICANCE

1968

By G. A. Schmidt
231 pp., 79 figs.

Publishing House "Nauka"
Moscow

This book is written in Russian and is announced only briefly. The author is head of the Institute of Evolutionary Morphology and Ecology of Animals of the Academy of Sciences of the U.S.S.R., Moscow. The book has a one-page summary and a table of contents in English.

The five chapters discuss consecutively: the three main types of embryogenesis (primary larval type, non-larval type, and secondary larval type); the evolutionary relationships between these types; the relationships between the type of embryogenesis and morphogenesis; periodisation of embryogenesis; and changes in type of embryogenesis as related to progressive evolution. There is an appendix on the ecological method as applied to embryology.

The book is illustrated mainly with line drawings. The bibliography covers 20 pages in small print; about one third of the titles are Russian.

38 DEVELOPMENT OF RECEPTOR STRUCTURES IN THE INNER EAR OF VERTEBRATES

1968

By A. K. Titova
192 pp., 73 figs.

Publishing House "Nauka"
Leningrad

This book is written in Russian and is announced only briefly. The book is in two parts. Part one deals with the structure of the adult inner ear, and with the ultrastructure and histochemistry of the vestibular sensory epithelium. Part two then deals more or less systematically with the embryonic development of the inner ear (morphology, ultrastructure, and histochemistry) in the major vertebrate orders.

All illustrations are photomicrographs and electron micrographs of reasonable quality. The bibliography covers 15 pages; about one quarter of the titles are Russian.

39 THE STABILITY OF THE DIFFERENTIATED STATE
1968

Editor: H. Ursprung
Res. and Probl. in Cell Diff., vol. 1
154 pp., 56 figs., 15 tbs.

Springer - Verlag
Berlin - Heidelberg - New York
Price: DM 54.—; $ 13.50

Contents: 1. Oscillations of the chondrogenic phenotype *in vitro* (H. Holtzer and J. Abbott); 2. Phenotypic expression and differentiation: *in vitro* chondrogenesis (J. W. Lash); 3. The nature and probable cause of modulation in pigment cell cultures (J. R. Whittaker); 4. Clonal aspects of muscle development and the stabality of the differentiated state (S. D. Hauschka); 5. Factors affecting inheritance and expression of differentiation: some methods of analysis (R. D. Cahn); 6. Dedifferentiation and metaplasia in vertebrate and invertebrate regeneration (E. D. Hay); 7. The acquisition, maintenance, and lability of the differentiated state in Hydra (A. L. Burnett); 8. The multipotential cell and the tumor problem (A. C. Braun); 9. The stability of the determined state in cultures of imaginal disks in Drosophila (W. Gehring)

This is the first volume of a new series. Since the rationale behind the series seems very sound, and the organization is promising, we feel that we can do no better than reproduce the series editor's preface in full in order to characterize the series.

"Looking through the tables of contents of recent "Advances" and "Progress" series in Cell and Developmental Biology, one realizes that the majority of these publications still take a systematic, rather than thematic approach for reviewing an area of interest. As a consequence, a given volume in a series often contains a collection of articles that for the specialist appear largely unrelated.

We felt that the time had come to review, periodically, a few of the central issues in Cell and Developmental Biology in highly topical volumes. This seems indicated if a variety of seemingly unrelated avenues of research begin to illuminate one common problem as in the present volume, for example. It is also indicated if a favorite exeprimental system has been exploited in sufficient depth to warrant a coherent description; some of the volumes planned for the near future fall into this category.

The authors of this volume were instructed not to describe historical background and experimental detail at great length, but to proceed, in each chapter, rapidly to the central issue: "The Stability of the Differentiated State". The book as a whole is meant to demonstrate the bearing of different lines of thought and experimentation on this central topic."

We do not intend to review the various contributions to this volume in detail (see table of contents above). Suffice it to say that all are highly authoritative, and truly topical in that they mainly concentrate on important recent work which has opened up new perspectives. All but one paper deal with animal cells (vertebrate and invertebrate); the paper by Braun is largely on crown gall tumours and teratomas in plants.

The book is very well printed and illustrated; it has no indexes.

40 BIOLOGY OF GESTATION
Vols. I and II, 1968

Editor: N. S. Assali
Vol. I: 507 pp., 156 figs., 23 tbs.
Vol. II: 406 pp., 97 figs., 47 tbs., 2 pls.

Academic Press
New York - London
Price: Vol. I: $ 27.—
Vol. II: $ 23.—

Contents vol. I: 1. The neural control of ovulation (Gorski); 2. Gametogenesis to implantation (Fridhandler); 3. Morphology of the placenta (Wynn); 4. Physiology of the placenta (Assali, Dilts, Plentl, Kirschbaum, and Gross); 5. Placental hormones (Simmer); 6. Regulation of myometrial composition, growth, and activity (Carsten); 7. The pregnant uterus: process of labour, puerperium, and lactation (Vorherr); 8. Maternal physiological adjustments (Hytten and Thomson)

Contents vol. II: 1. Growth and composition of the fetus and newborn (Widdowson); 2. Fetal and neonatal circulation (Assali, Bekey, and Morrison); 3. Maternal and fetal blood constituents (Kirschbaum and DeHaven); 4. The fetal and neonatal lung (Towers); 5. Fetal

and neonatal kidney (Vernier and F. G. Smith Jr.); 6. Development and plasticity of the nervous system (Timiras, Vernadakis, and Sherwood); 7. Development of fetal and neonatal immunological function (R. T. Smith); 8. Bilirubin metabolism in the developing liver (A. K. Brown)

This is a collaborative treatise to which 25 authors have contributed. Vol. I is subtitled "The Maternal Organism", and Vol. II "The Fetus and Neonate"; both consist of 8 chapters, ranging in length from about 20 to about 100 pages. Two authors are British, the others American; most of the authors are active investigators at Departments of Obstetrics and Gynaecology, Pediatrics, or Anatomy. The work is conceived for students and research workers in reproduction and in obstetrics and pediatrics on the one hand, and for clinicians in obstetrics and pediatrics on the other. Its aim is to establish a set of normal standards and values for mother, fetus, and newborn. The space available to the authors has enabled them to treat their subjects in depth and on a broad fundamental basis rather than from the limited specialist viewpoint.

The various chapters will not be reviewed. The reader is referred to the tables of contents above.

The books are well produced and well illustrated. Each chapter has its own bibliography; some of these are up to date until 1966, others even until 1967. Both volumes are concluded by author and subject indexes.

41 CELLULAR ASPECTS OF DEVELOPMENTAL PATHOLOGY

1967

By R. P. Bolande
374 pp., 125 figs.

Lea & Febiger
Philadelphia
Price: $ 16.50

This book was written primarily for medical students, pathologists, and pediatricians. Adequate knowledge of general and special pathology is assumed. The book is not intended as a reference work on pediatric pathology; the treatment is selective rather than comprehensive, and the emphasis is on cellular, subcellular, and tissue morphology. An attempt was made to weave into the structure of the book many of the new concepts from developmental biology; in this respect, however, the book is disappointing, and one feels that the author would have done better to seek the advice or help of a specialist in developmental biology.

The book is well organized. It starts with a chapter on the general nature of developing cells, tissues and organs, followed by a chapter on general reactions to injury. Then follows a chapter on neoplasia. The remaining chapters deal successively with genetic diseases of cells, metabolic, nutritional, and chemical injuries, infectious injury, and immune injury and allergic reactions.

The book is illustrated with a large number of good photographs, many of which are original. Their reproduction is rather "gray", and there is sometimes considerable loss of cellular detail. Each chapter has its own extensive bibliography. The book is well printed and is concluded by a detailed subject index.

42 HANDBUCH DER UROLOGIE
Vol. I. Anatomie und Embryologie
1969

By K. Conrad, H. Ferner, A. Gisel, H. v. Hayek, W. Krause, St. Wieser, and Chr. Zaki
637 pp., 363 figs.

Springer-Verlag
Berlin - Heidelberg - New York
Price: DM 286.—; $ 71.50

This is the first volume of an Encyclopedia of Urology that will ultimately encompass more than 20 volumes. We focus our attention on the first part of the present volume, "Die Entwicklung der Harn- und Geschlechtsorgane" by H. von Hayek, Vienna.

The author states that the last comprehensive review of the embryology of the human urogenital system was that published by Felix in 1911. He has consequently re-examined the whole subject personally with the help of the extensive Hochstetter collection of serial sections of human embryos present in Vienna. His study covers the first 50 pages of the book, and contains 47 excellent figures (line drawings, photomicrographs, and reconstructions). Among them is a series of 10 photographs made by Hochstetter, showing the external development of the genitalia. The literature list consists of 81 titles, but strangely enough several references given in the text are missing in the bibliography.

The book as a whole is beautifully produced, as is usual with this publisher.

43 THE ANATOMY OF THE DEVELOPING LUNG
1969

Editor: J. L. Emery
223 pp., 103 figs., 6 tbs.

Heinemann Medical Books Ltd.
London
SBN 433 09300 5
Price: 55 s.; $ 7.—

Contributors: Balis (Hines, Ill.), Bucher (Bern), Conen (Toronto), Emery (Sheffield), Fagan (Sheffield), de Haller (Davos-Dorf), Heath (Liverpool), Ivemark (Stockholm), Lind (Stockholm), Mithal (Sheffield), Robertson (Stockholm)

In this book no attempt is made to cover the whole anatomy of the lung or to compete with recent handbooks in this field. It brings together a number of contributions by persons working in the field of structural changes in the lung of the growing fetus and the newborn, in order to facilitate the correlation of physiological and anatomical data. Most of the authors are not anatomists, but paediatricians and pathologists.

On account of the specialized nature of the book, its 11 chapters will not be reviewed in detail. The book is well printed and well illustrated. It is concluded by a combined author and subject index.

44 FEINSTRUKTUR DER PLAZENTA
Elektronenoptische Untersuchungen über die reifende und reife Plazenta der Ratte
1969

By H. Franke
340 pp., 19 figs., 5 tbs., 222 pls., 5 loose plates

VEB Gustav Fischer Verlag
Jena
Price: MDN 129.50

This thorough work describes the ultrastructural organization of the rat placenta, with special reference to the changes in fine structure during the course of gestation. It is for the far greater part based on the author's own research, carried out in the framework of investigations on the embryonic

metabolism of the rat conducted at the Pathophysiological Institute of the University of Jena, D.D.R. The treatment concentrates on the structural findings; their interpretation is not always discussed exhaustively, the reader being referred to the relevant specialist literature.

Of the six brief introductory chapters, one is a survey of the ultrastructural and functional organisation of animal cells in general, while another treats in detail the methods used in this investigation, which were elaborated particularly with the aim of obtaining large-surface longitudinal sections. The next five chapters deal with the structure of the 19-day placenta, used as a basis of reference for the other stages. The following zones are described consecutively: decidua basalis, giant cell zone, trophospongium, and labyrinth. After a brief chapter on early development and placentation in murids, the same four zones are again taken up, this time with reference to the changes occurring between the 10th and the 22nd day of gestation. From chapter 7 onwards the major chapters each have a brief summary.

More than half of the book is taken up by plates. The majority of these are full-page, often composite electron micrographs. Unfortunately their quality is not very good, which is probably largely due to unsatisfactory fixation of the material. In addition to the plates there are five large, loose out-folding plates, attached to the back cover of the book. The book is concluded by an extensive bibliography, with an appendix bringing it up to date until 1968, and a detailed subject index.

45 THYROIDE MATERNELLE ET DEVELOPPEMENT PRENATAL DU RAT

1968

By A. Gommers
296 pp., 23 figs., 72 tbs., 32 pls.

Editions Arscia S.A., Bruxelles
Librairie Maloine S.A., Paris
Price: F 70.—

The author of this monograph works at the University of Louvain, Belgium. The book is essentially an account of her own extensive experimental work on the rat, preceded by a thorough literature review. The original data are organized in four chapters, discussing successively: the influence of thyroid hormone on reproduction and on the survival and growth of the fetus; the influence of the thyroid state of the mother on carbohydrate metabolism of fetal tissues; the influence of thyroid hormone on oxygen consumption of fetal tissues; and the influence of thyroid hormone on differentiation (organogenesis and ossification).

The book has a laudative preface by Prof. H. Tuchmann-Duplessis (Paris). It is well printed and illustrated with high-quality original photographs, and has an extensive bibliography.

46 HUMAN TROPHOBLAST

1968

By A. T. Hertig
363 pp., 274 figs., 5 tbs.

Charles C. Thomas
Springfield, Ill.
Price: $ 12.—

Although this monograph was written primarily with pathologist and obstretician readers in mind, it will be received with great interest by human embryologists, because a large part of it is concerned with the normal trophoblast. We will mainly focus our attention on this part; it consists of 1) a brief historical review, 2) a brief chapter on the origin of the trophoblast

(12 pp.), 3) an extensive chapter on the differentiation of the trophoblast (92 pp.), and 4) a chapter on chorion-embryonic relationships (19 pp.). Much of the discussion is based on the author's own research and that of his associates.

The third of the chapters listed above is subdivided into five sections as follows: section A deals with morphological observations (implantation, lacuna formation, previllous and villous trophoblast; section B describes the formation of auxiliary placental structures (primary mesoderm formation, angiogenesis, and amniogenesis); section C deals with the trophoblast in organ culture (based on the work of T.-W. Tao); section D treats the histochemistry of the developing trophoblast, while section E discusses the physiological significance of these findings.

The rest of the book deals with the pathology of the trophoblast at various stages. The book is illustrated profusely, mainly with very fine gross and microscopic photographs and reconstructions. Much of the illustrative material originates from the Carnegie Department of Embryology. The book is very well produced, has a bibliography of more than 150 titles, and is concluded by a detailed subject index.

47 PRENATAL DETERMINANTS OF BEHAVIOUR

1969

By J. M. Joffe
Intern. Ser. Monogr. Exper. Psychol., vol. 7
366 pp., 19 figs., 52 tbs.

Pergamon Press
Oxford etc.
Price: £ 5.0.0; $ 13.—

No sharp borderline can be drawn between experimental teratology and the effects of prenatal treatments on postnatal behaviour. This monograph deals with effects that every experimental teratologist is liable to encounter during his experiments. It is a review and critical discussion of evidence on the effects on postnatal behaviour of a variety of agents, including X-rays, drugs, hormones, nutrition, and stress situations. Two features of the book are of particular value to teratologists: the emphasis throughout on the methodology of this type of work rather than on the substantive findings, and the stress put on the interaction of environmental factors with the hereditary constitution of the experimental animal. Most of the book deals with the results of experiments on mammals. Three of the 11 chapters deal with the human subject.

The book is well produced and illustrated almost exclusively with graphical material. It has a 21-page bibliography, a name index, and a detailed subject index.

48 TERATOLOGY OF THE CENTRAL NERVOUS SYSTEM

Induced and spontaneous malformations of laboratory, agricultural and domestic mammals

1968

By H. Kalter
483 pp., 20 figs., 3 tbs.

The University of Chicago Press
Chicago - London
Price: 157 s.; $ 17.50

This thorough work is essentially compilatory in nature; it is written by a long-standing expert in the field. The exclusion of the human species, though it seems justified from the size of the book as it is, is nowhere argued explicitly. However, the non-human mammals are treated exhaustively.

Throughout the book the emphasis is mostly on anatomical description of the nervous system and related structures. The possible mechanisms of action of teratogens are extensively discussed only for hypervitaminosis A, trypan blue, and ionizing radiation.

The book is in two parts, each occupying about half its total size. Part one, entitled "Experimentally induced malformations", starts with a brief but concentrated chapter on principles and techniques of experimental mammalian teratology. It proceeds with chapters discussing the effects of nutrient deficiency, hypervitaminosis A, trypan blue, ionizing radiation, and miscellaneous other teratogenic substances and procedures. Part two is entitled "Spontaneous malformations" and, after a brief introduction, proceeds to discuss separately the genetic and sporadic malformations of the central nervous system found in 11 mammalian species, in non-human primates, and in miscellaneous other species.

The illustrations are restricted to 27 photographs, 26 of which are original and apparently were not published earlier. The list of references covers nearly 100 pages (its typography is rather awkward). The book is well produced, and is concluded by author and subject indexes.

49 NERVOUS REGULATION OF INTESTINAL MOBILITY IN ONTOGENESIS

1968

By E. M. Kobakova
131 pp., 20 figs., 5 tbs.
(paper-bound)

Publishing House "Nauka"
Leningrad

This monograph is written in Russian and is announced only briefly. The author has been an active worker in this field at the Pavlov Institute of Physiology for over twenty years. The book reports on experimental work carried out mainly with dogs and rabbits. The bibliography covers 17 pages, 14 of which are devoted to Russian literature, both older and recent.

50 EXPERIMENTELLE PRAENATAL-TOXIKOLOGIE

1968

By Th. von Kreybig
212 pp., 76 figs., 47 tbs.

Editio Cantor KG
Aulendorf i. Württ.
Price: DM 64.—

With this monograph the author has intended to present the biological and toxicological foundations of experimental prenatal toxicology in mammals, in connection with his own experience in the field. It was not his intention to review the literature exhaustively. The book contains much original thought and will certainly be stimulating reading for any specialist working in this field and in the related field of teratogenesis.

The organization of the book is logical and clear. The introduction is followed by a chapter discussing the embryological and developmental-physiological foundations, with special sections devoted to the rat, the mouse, and the guinea pig. The next chapter deals with general aspects of prenatal toxicology, such as phase specificity, organotropic effects, dose-response relationships, and the general course of teratogenic processes. Then follows a chapter summarizing the data of special prenatal toxicology, in which the treatment is according to the chemical nature of the compounds tested. The book is concluded by a useful chapter on the methodology of animal experiments.

The book is profusely illutrated; the great majority of the figures are original. The book is well printed, but the type is very small, which leads to unnecessary fatigue for the reader. The extensive bibliography unfortunately gives no titles, while the subject index is very incomplete. The price of the book seems excessive.

51 ZUR NEUROANATOMIE UND NEUROPATHOLOGIE DER FRÜHFETALZEIT

Untersuchungen an Gehirnen menschlicher Keimlinge einer Scheitel-Fersen-Länge von 13 bis 38 cm

1968

By H. Solcher
79 pp., 39 figs., 2 tbs.
(paper-bound)

Springer-Verlag
Berlin - Heidelberg - New York
Price: DM 39.—; $ 9.75

This monograph is concerned with anatomical and pathological findings in the brains of 65 human fetuses of from 13 to 38 cm crown-heel-length (i.e. approximately the fourth to sixth month of pregnancy). This "early fetal" period has been investigated much less intensively than both earlier and later periods. The non-selected material investigated consisted of 56 spontaneous abortions, 4 induced abortions, and 2 autopsies.

On the basis of a comparative morphological study some unsolved problems of normal developmental neuro-anatomy could be cleared up, and some new insight could be obtained. The most important result of the pathological part of the investigation is the unexpectedly high incidence of intracerebral hemorrhages. The aetiology of these hemorrhages appeared to be very difficult. The author comes to the conclusion that postnatal cerebral damage is often erroneously ascribed to birth trauma.

The book is well printed, and illustrated mostly with very good photomicrographs. It has an appendix summarizing the maternal anamneses and fetal findings, and is concluded by a bibliography and a subject index. The price seems excessive.

52 THE HUMAN PLACENTA

Its shape, form, origin, and development

1969

By R. Torpin
190 pp., 55 figs., 5 tbs.

Charles C. Thomas
Springfield, Ill.
Price: $ 11.75

This monograph will be of interest to obstetricians and human embryologists. It is not a compilatory work but rather the exposition of an original hypothesis explaining the variations of gross placental anatomy, a subject that has received little attention from human embryologists so far. The hypothesis is based on two concepts, viz. (1) that all human placental types bear a definite relationship to each other, and (2) that the variations must stem from the very first week of ovular-decidual relationship (factors involved: implantation site and variable depth of ovular embedding). The resulting comprehensive hypothesis of placentation is applicable to all villous-placental primates.

The bibliography cites more than 400 papers covering the literature of the past two centuries in all language areas. The book is well produced and illustrated with good photographs and drawings. It has a combined author and subject index.

53 KLINIK UND PATHOLOGIE DER DYSMELIE
Die Fehlbildungen an den oberen Extremitäten
bei der Thalidomid-Embryopathie
1969

By H.-G. Willert and H.-L. Henkel
147 pp., 36 figs., 4 tbs.

Springer-Verlag
Berlin - Heidelberg - New York
Price: DM 38.—; $ 9.50

This very thorough monograph is based on clinical and X-ray findings in 203 dysmelic children (with 324 malformed upper limbs in all) examined in the orthopedic clinic of the University of Heidelberg. Although the book is no doubt of primary importance to orthopedic surgeons, it contains much that will be of value for teratologists and embryologists interested in limb development.

The material is rigorously classified, and a continuous "teratological series" is established, within which certain groups of skeletal malformations can be distinguished, which constitute a skeletal malformation pattern. This pattern is compared with that previously obtained for the lower limb in similar material. Next the pattern is discussed in relation to limb malformations obtained in animal experiments, and their possible explanations in terms of "competition" between, and local restitution of skeletal rudiments. Finally it is shown that neither the limb malformation pattern itself nor its association with other malformations is specific for thalidomide.

The book is very well produced and illustrated. It has a 14-page bibliography and a subject index.

54 NUCLEIC ACID METABOLISM, CELL DIFFERENTIATION AND CANCER GROWTH
1969

Editors: E. V. Cowdry and S. Seno
483 pp., 240 figs., 46 tbs., 10 pls.

Pergamon Press
Oxford etc.
Price: 160 s.

Contributors: Amano (Tokyo), Braun (New York, N.Y.), Busch (Houston, Tex.), Fitzgerald (Brooklyn, N.Y.), Hagiwara (Kyoto), Hamashima (Kyoto), Hanafusa (New York, N.Y.), Hanaoka (Kyoto), Haruna (Urbana, Ill.), Hori (Sapporo), Ishikawa (Kanazawa), Ishizaki (Kyoto), Iwata (Tokushima), Izawa (Tokyo), Kameyama (Kanazawa), Kasten (Pasadena, Calif.), Kato (Osaka), Kawakami (Fukuoka), Kimoto (Okayama), Kinosita (Duarte, Calif.), Kuroda (Mishima), Marco (Milan), Mitsuhashi (Maebashi), Miura (Chiba), Miyahara (Okayama), Morikawa (Kyoto), Naora (Tokyo), Okada (Kyoto), Seno (Okayama), Shirakawa (Kyoto), Spiegelmann (Urbana, Ill.), Suyama (Kanazawa), Takeuchi (Toyonaka), Terayama (Tokyo), Thorell (Stockholm), Valladares (Madrid), Wakisaka (Kyoto), R. Watanabe (Kanazawa), Y. Watanabe (Tokyo), M. Yamada (Tokyo), M. Yamada (Tokushima), Yamamoto (Tokyo), Yanagita (Tokyo), Zeuthen (Copenhagen)

This book embodies the proceedings of the Second International Symposium for Cellular Chemistry, held in Ohtsu, Japan, in October 1966. It was attended by more than 100 scientists, chiefly Japanese workers. Of the 44 contributors, 32 were from Japan, 8 from the U.S.A., and 4 from Europe. The long lapse of time since the Symposium took place diminishes the topical value of the book. On the other hand, some of the Japanese work would not have been accessible without this publication.

The 38 research papers are grouped into four groups, dealing respectively with: (1) transcription; (2) RNA-protein syntheses and cell differentiation; (3) cell multiplication and differentiation; and (4) control of cell growth, cell transformation and cancer induction by virus. Only the second and third sections contain papers that are of direct interest to developmental biologists. Among these are papers by Kawakami *et al.* on primary induction in

amphibians, by Zeuthen and Williams on division-limiting morphogenetic processes in *Tetrahymena*, by Seno *et al.* on erythroid cell differentiation, by Kuroda on aggregating factors in embryonic liver cells, by Takeuchi on polar organization in slime molds, and by Yanagita *et al.* on fruit body formation in *Basidiomycetae*.

Most of the papers are followed by brief group discussions. The book is very well produced and illustrated, and is concluded by a subject index.

55 THE EMERGENCE OF ORDER IN DEVELOPING SYSTEMS

1968

Editor: M. Locke
Devel. Biol., Suppl. 2
350 pp., 113 figs., 17 tbs.

Academic Press
New York - London
Price: $ 12.—

Contributors: Anfinsen (Bethesda, Md.), DeHaan (Baltimore, Md.), Edds (Providence, R.I.), Fawcett (Boston, Mass.), Gross (Boston, Mass.), Hamburger (St. Louis, Mo.), Harrington (Baltimore, Md.), Heslop-Harrison (Madison, Wis.), Josephs (Baltimore, Md.), Kollros (Iowa, Ia.), Loewenstein (New York, N.Y.), Robbins (Cambridge, Mass.), Sperry (Pasadena, Calif.), Tilney (Cambridge, Mass.), Weston (Cleveland, Ohio), Zwilling (Waltham, Mass.)

This is the report of the 27th Developmental Biology Symposium held in Ithaca, N.Y. in June 1968. The volume is dedicated to Viktor Hamburger, and contains a delightful address in honour of Hamburger by J. Holtfreter.

The 11 papers read at the Symposium are grouped into four sections as follows: I. Self-assembly of macromolecular structures (2 papers); II. Ordering of subcellular units (3); III. Emergence of order in tissues and organs (3); IV. Emergence of nervous coordination (3). All papers are highly authoritative and well organized, and all will be read with great interest by developmental biologists. The following papers dealing with rather less familiar subjects may be mentioned specifically: a paper by Tilney on the role of microtubules in cellular morphogenesis; one by Heslop-Harrison on the emergence of cell wall pattern in higher plants; one by Loewenstein on electrical and chemical communication through cell junctions and its developmental implications; and one by Sperry on plasticity of neural maturation in man.

The discussions held at the Symposium are not recorded. The book is well illustrated and has author and subject indexes.

56 DIFFERENTIATION AND DEFENSE MECHANISMS IN LOWER ORGANISMS

1968

Editor: M. M. Sigel
"In Vitro" vol. 3
211 pp., 88 figs., 22 tbs.

The Tissue Culture Association
The Williams & Wilkins Comp.
Baltimore
Price: $ 11.50

Contributors: Acton (Birmingham, Ala.), Attleberger (Birmingham, Ala.), Beasley (Coral Gables, Fla.), Burnett (Notre Dame, Ind.), Caldwell (Fargo, N.D.), Campbell (Irvine, Calif.), Chadwick (Kingston, Ont.), Clutter (New Haven, Conn.), Davis (Cleveland, Ohio), Dawe (Bethesda, Md.), Doyle (Storrs, Conn.), Evans (Birmingham, Ala.), Fox (Madison, Wis.), Grace (Canberra), Haynes (Notre Dame, Ind.), Horikawa (Madison, Wis.), Kent (Newark, Del.), Laufer (Storrs, Conn.), Legler (Birmingham, Ala.), Lenhoff (Coral Gables, Fla.), Ling (Madison, Wis.), Marks (Fargo, N.D.), Moscona (Chicago, Ill.), Painter (Birmingham, Ala.), Regan (Oak Ridge, Tenn.), Reinecke (Fargo, N.D.), Sigel (Coral Gables, Fla.), Sussex (New Haven, Conn.), Tripp (Newark, Del.)

This book embodies the papers read at a Symposium held in Philadelphia on June 5—7, 1967, as well as abstracts of all papers presented at the 18th

annual meeting of the Tissue Culture Association (June 4—7). The idea behind the Symposium was the evolution of defense mechanisms. An attempt was made to bring together information bearing on some primitive anatomical and physiological attributes of lower organisms which contribute to their defense and survival. Important mechanisms involved are cellular aggregation and cell recognition.

The 15 research papers are grouped in three sections, respectively dealing with aspects of aggregation and differentiation, with insect cell cultures, and with primitive mechanisms of resistance to infection. The last section is of no direct interest to developmental biologists. The first section contains papers on plant cells (Sussex and Clutter), sponge cells (Moscona), and Hydra (Campbell; Lenhoff; Haynes *et al.*). The second section contains papers by Fox *et al.*, Marks *et al.*, Doyle and Laufer, and Grace. The first of these is particularly interesting because it focuses largely on the biochemical differentiation of embryonic *Drosophila* cells in culture.

The book is beautifully produced and illustrated. It is concluded by a combined author and subject index.

57 LES INTERACTIONS TISSULAIRES AU COURS DE L'ORGANOGENESE
1969

Editor: E. Wolff
244 pp., 100 figs., 9 tbs., 16 pls.

Dunod
Paris
Price: £ 6.6.6

Contributors: Benoit (Nogent-sur-Marne), Croisille (Paris), Dameron (Paris), Le Douarin (Nantes), Marin (Paris), Schowing (Nogent-sur-Marne), Sengel (Grenoble), Sigot (Nogent-sur-Marne), Tiedemann (Berlin), Wolff (Paris).

This series of papers is based on a series of seminars given at the Collège de France during 1967. In almost all of them the emphasis was on the greater or lesser degree of specificity of inductive interactions encountered in various systems. This emphasis seems justified in order to counterbalance the frequently expressed idea that inductive interactions tend to be aspecific. The papers give so much background information that they are understandable for students and non-specialists.

Except for H. Tiedemann, all authors are or have been closely associated with the laboratory of Prof. Wolff, and all are working on aspects of avian organogenesis. The following systems are considered, among others: kidney, liver, skin and feathers, neurocranium, lung, and stomach. Immunological aspects of inductive interaction are discussed in a chapter by Y. Croisille. H. Tiedemann considers biochemical aspects of tissue interactions in the early amphibian embryo. E. Wolff has contributed a brief introduction and a concluding chapter, both lucidly written, as well as a chapter on general principles of determination, in which he devotes much attention to the recent experiments of Hadorn and his group on insect imaginal disc material cultured *in vivo*.

The book is well produced and profusely illustrated. It is concluded by an author index. The price is unfortunately prohibitive, particularly for students.

58 TERATOLOGY
1969

Editors: A. Bertelli and L. Donati
240 pp., 161 figs., 43 tbs.

Excerpta Medica Foundation
Amsterdam
Price: $ 15.—

Contributors: Beck (Cardiff), Bellairs (London), Bertelli (Milan), Bertolini (Modena), Cook (Taplow, Maidenhead), Del Porto (Rome), De Meyer (Louvain), De Plaen (Louvain), Donati (Milan), Done (Weybridge), Fairweather (Taplow, Maidenhead), Ferrari (Modena), Gedda (Rome), Giordano (Milan), Grauwiler (Basel), Harding (Weybridge), Hardwick (Taplow, Maidenhead), Kassabov (Sofia), Konstantinova (Sofia), Leone (Milan), Lloyd (Cardiff), Mascherpa (Pavia), McKenzie (Aberdeen), Neukomm (Lausanne), Ohre Nielson (Oslo), Palludan (Copenhagen), Palmer (Huntingdon), Rinaldi (Parma), Töndury (Zürich), Tuchmann-Duplessis (Paris), Vichi (Florence), Von Kreybig (Tübingen), Weber (Berne)

This book contains the papers presented at a Symposium organized by the Italian Society of Experimental Teratology in Como, in October 1967. The attendance was all-European, and a broad range of subjects was covered. The discussions are not recorded.

The 23 papers are arranged in four sections as follows: I. Teratogenic activity tests (5 papers); II. Teratogenic action of pharmaceutical and chemical agents (7); III. Biochemical mechanisms of teratogenesis (7); IV. Congenital malformations (4). Section I opens with a paper by Neukomm on the use of the regenerating urodele tail as a screening system. Section III contains a paper by Weber on the mechanism of tissue destruction during anuran metamorphosis, and one by Bellairs on experimental twinning and multiple monsters in chick embryos. Section IV deals entirely with human malformations. All other contributions are concerned with work on various birds and mammals.

The book is well printed and well illustrated. It has a subject index and an index to Symposium contributors (erroneously called author index).

59 EFFECTS OF RADIATION ON CELLULAR PROLIFERATION AND DIFFERENTIATION
1968

Edited by I A E A
570 pp., 219 figs., 58 tbs.
(paper-bound)

Internat. Atomic Energy Agency
Vienna
Price: $ 13.50

This is the report of a Symposium held in Monaco in April 1968. It was attended by more than 100 scientists from 20 countries. Of the 40 papers read 36 are in English, three in French, and one in Russian. All papers have English abstracts. The discussions following the papers are included.

Attention was focused on the radiobiology of cell renewal systems, with particular emphasis on characterizing the properties, responses and potentialities of the haemopoietic stem cells under normal and abnormal conditions. Complementary studies were presented on tumour cells and intestinal cells and their response to irradiation. In addition, biochemical considerations of injury and repair in mammalian cell systems were examined.

The book is produced in offset print and is adequately illustrated. It has a list of participants and an index to contributors and discussants.

60 ONTOGENESIS OF THE BRAIN

The biochemical, functional and structural development of the nervous system

1968

Editors: L. Jílek and S. Trojan
462 pp., 300 figs., 35 tbs.

Universita Karlova (Charles Univ.)
Praha (Prague)

This volume contains the papers read at the International Symposium Neuroontogeneticum held in Prague on September 11—16, 1967. The list of contributors shows 102 names; 65 of the contributors came from Eastern European countries, the remaining 37 from Western Europe and the U.S.A. The theme of the Symposium was the development of the central nervous system from the structural, functional, and biochemical point of view. The main attention was focused on the following problems: the reflex and electrical activity of the CNS in prenatal ontogeny; the reaction and adaptations of the nervous tissue to hypoxia; the development of oxidative metabolism; and the functional relationships between the cerebral cortex and the subcortical structures.

Most of the 53 research papers are short, the majority being less than 10 pages long; all are in English. The book is adequately illustrated; photographs are reproduced on glossy paper. The volume is concluded by author and subject indexes.

61 REPRODUCTION IN THE FEMALE MAMMAL

1967

Editors: G. E. Lamming and E. C. Amoroso
583 pp., 84 figs., 82 tbs., 14 pls.

Butterworths
London
Price: £ 8.0.0

Contributors: Adams (Cambridge), Amoroso (London), Bedford (London), Butt (Birmingham), Chang (Shrewsbury, Mass.), Crighton Loughborough), Donovan (London), Finn (London), Gemzell (Uppsala), Hansel (Ithaca, N.Y.), Haynes (Loughborough), Jöchle (Mexico D.F.), Karg (Munich), Lake (Edinburgh), McCann (Dallas, Tex.), Melampy (Ames, Ia.), Nalbandov (Urbana, Ill.), v. Rees (Leiden), Reichert (Atlanta, Ga.), Robertson (Aberdeen), Robinson (Sydney), Rothchild (Cleveland, Ohio), Saji (Loughborough), Schilling (Mariensee), Tindal (Reading)

Although the subject of this Symposium is peripheral to developmental biology, it is nevertheless considered of sufficient interest to mammalian embryologists to be briefly reviewed. Moreover, the present Symposium merges into one with its successor, which dealt with "The growth and development of mammals" (14th Nottingham Easter School, 1967, not available for review).

The 28 papers read at the Symposium are grouped in 7 sections, respectively dealing with hypothalamic control of reproductive processes; separation, purification and immuno-assay of gonadotrophins; cyclic variation of gonadotrophin secretion and release; comparative aspects of reproduction in poultry; interrelationships between the pituitary gland and the corpus luteum; artificial control of reproduction; hormonal control of uterine reactions. The last section contains, among others, a paper by Chang on the uterine endometrium to spermatozoa and eggs, a paper by Finn on the reaction of the uterus during implantation in the mouse, and a paper by Adams on ovarian control of early embryonic development within the uterus.

All papers but one are followed by brief discussions, while a separate evening discussion was devoted to the problem of corpus luteum maintenance.

The book is well printed and adequately illustrated. It is concluded by a list of participants, and by author and subject indexes.

62 OVUM IMPLANTATION

Its hormonal, biochemical, neurophysiological and immunological bases

1969

Editors: M. C. Shelesnyak and G. J. Marcus
482 pp., 37 figs., 9 tbs.

Gordon and Breach
New York - London - Paris
Price: $ 31.—

Participants: Ayalla (Rehovoth, Israel), Billingham (Philadelphia, Pa.), Everett (Durham, N.C.), Gorski (Urbana, Ill.), Gruber (Rehovoth), Joshi (Rehovoth), Katsh (Denver, Colo.), Kisch (Rehovoth), Kraicer (Rehovoth), Lamprecht (Rehovoth), Lindner (Rehovoth), Lobel (Rehovoth), Marcus (Baltimore, Md.), Schayer (Orangeburg, N.Y.), Shelesnyak (Rehovoth), C. Tachi (Rehovoth), S. Tachi (Rehovoth), Tausk (Utrecht), Von Euler (Stockholm) Zmigrod (Rehovoth)

This book embodies the proceedings ot a Workshop organized by the Weiszmann Institute of Science in Rehovoth, Israel, in August 1967. It had 20 participants, 12 from Israel, 6 from the U.S.A., and one each from Holland and Sweden. The scope of the Workshop was wider than is suggested by the title. Many endocrinological, neurophysiological, biochemical and immunological aspects of reproductive physiology are touched upon, such as the role of histamine, ot adrenergic neurotransmitter, of estrogen and progesterone, and the influence of the diencephalon. Only one of the papers is actually concerned with the early embryo itself rather than with the uterus or reproduction generally: this is the one by Billingham entitled "Transplantation immunity and the mammalian embryo".

Most of the papers are comprehensive reviews and discuss the historical development of the subject in question as well as the most recent advances. All papers are followed by extensive discussions which are rendered *verbatim*, and to which literature references were added later. There is a concluding summary of the Workshop by M. Tausk.

The book is produced in offset print; it has few illustrations. Considering this, the price is excessive. There is a subject index, but no author index or index to participants, which would have been useful particularly with a view to the lengthy discussions.

63 CONTROL OF CELLULAR GROWTH IN ADULT ORGANISMS

1967

Editors: H. Teir and T. Rytömaa
457 pp., 132 figs., 50 tbs.
A Sigrid Jusélius Found. Symposium

Academic Press
London - New York
Price: 100 s.

Contributors: Alexander (London), Alho (Helsinki), Bade (Mendoza), Bolden (Nashville, Tenn.), Brenner (Helsinki), Bullough (London), Claude (Brussels), Craddock (Los Angeles, Calif.), Duplan (Paris), Echave Llanos (Mendoza), Elgjo (Oslo), Fichtelius (Uppsala), Forsell (Helsinki), Glinos (Washington, D.C.), Goss (Providence, R.I.), Grundmann (Wuppertal), Guelstein (Moscow), Haddow (London), Holsti (Helsinki), Iversen (Oslo), Jalavisto (Helsinki), Kekomäki (Helsinki), Kiviniemi (Helsinki), Lahtiharju (Helsinki), Lajtha (Manchester), Larsen (Bergen), Laurence (London), Lawrence (Los Angeles, Calif.), Linna (Uppsala), Littbrand (Stockholm), Matsuyuki (Los Angeles, Calif.), Modig (Stockholm), Perttala (Helsinki), Rabes (Heidelberg), Räsänen (Helsinki), Renkonen (Helsinki), Révész (Stockholm), Rytömaa (Helsinki), Smithers (London), Teir (Helsinki), Tumanishvili (Tbilissi), Vasiliev (Moscow), Virolainen (Helsinki), Weiss (Houston, Tex.), Wikgren (Turku), Winkelstein (Los Angeles, Calif.), Wrba (Heidelberg)

Although the Symposium of which this book is the report was held four years ago, it is thought still to be of sufficient interest to be reviewed. The Symposium

was held in Helsinki in October 1965; it had more than 70 participants, the majority of whom came from Finland and other Scandinavian and Western European countries. The central theme of the Symposium was the dynamic balance between cell loss and cell production in the adult (mainly mammalian) organism, and the mechanisms which maintain it.

The book is opened by a lengthy systematic theoretical introduction by R. J. Goss ("The strategy of growth"). The other 29 contributions are of mixed character; some are more or less extensive reviews (e.g. that by W. S. Bullough and E. B. Laurence on epigenetic mitotic control and the role of chalone), others are shorter or longer research reports, or are almost purely theoretical in nature (e.g. that by L. G. Lajtha on proliferation kinetics of steady state cell populations).

The papers are grouped into eight sections, two on general aspects, one on haematopoiesis, one on lymphoid cells, one on liver regeneration, one on miscellaneous aspects, and one on aspects in malignancy. The last section, entitled "General discussion", contains some reflections on growth by a plant physiologist (P. Larsen), and a brief list of methodological remarks on the measurement of growth (O. H. Iversen).

The discussions held at the Symposium are not recorded, but each section is concluded by a discussion summary edited by the chairman of the section. In his concluding remarks to the Symposium P. Weiss focuses attention on unsolved problems that came up during the meetings.

The book is well produced and well illustrated. It is concluded by author and subject indexes.

64 PLANT TISSUE CULTURE AND PLANT MORPHOGENESIS

1968

By R. G. Butenko
291 pp., 104 figs.

Israel Program for Scientific Translations
Jerusalem
Price: $ 12.75; (U.K.) 90 s.

This is a translation of a book published in Russian in 1964. It is consequently partly out-dated, so that its main interest for readers in the West may be that it provides a key to otherwise inaccessible literature published in Eastern Europe. The introduction contains a useful listing of work in the field of plant tissue culture being carried out by research groups in various countries, among them China and five Eastern European countries.

The author has been an active investigator in this field since 1957, as one of the first in Russia; he works at the K. A. Timiryazev Institute of Plant Physiology, Acad. of Sci. of the U.S.S.R. The book is in two parts, the first of which deals with methods and techniques (3 chapters); part two discusses growth, metabolism, and morphogenesis in cultured plant tissues, cell suspensions, and free cells (4 chapters).

The book is well translated, but it contains many printing errors, and several authors cited in the text are omitted from the bibliography. The book is produced in offset print and is illustrated mainly with photographs, which are unfortunately poorly reproduced. The bibliography is divided into a Russian section (11 pages, with translated titles) and a non-Russian one (43 pages). The book is concluded by an author index. Considering its limited topicality its price is excessive.

65 GROWTH AND ORGANIZATION IN PLANTS
Structure; development; metabolism; physiology
1968

By F. C. Steward
564 pp., 245 figs., 35 tbs.

Addison-Wesley Publishing Cy.
Reading, Mass., etc.

Contents: 1. Concepts of growth and development: the scope of the problem; 2. Growth and nutrition: inorganic nutrition; 3. Growth and organic nutrition: the building of complex molecules; 4. The non nutrient requirements and stimuli for growth: growth-regulatory substances; 5. Cell growth and cell division: growth forms; 6. Physiological functions: their correlations with growth; 7. Morphogenetic stimuli; 8. The onset of flowering and fruiting: contrasts in vegetative and reproductive growth; 9. Quantitative interpretations of growth: growth curves and control systems; 10. Totipotency and diversification in cultured cells: organization and the capacity to grow

This is neither a text-book nor a compilatory work of reference. The book is based on a series of lectures given for biology teachers, and centres largely around the author's own research on a variety of aspects of plant growth and development. The style is highly personal. The book covers an amazing range of topics, mainly but by no means exclusively bearing on the angiosperms, and will no doubt be valuable to readers active in this field, as well as to developmental biologists generally. The central idea pervading the whole book is that biological organization is a field of study *sui generis*, and that its problems can never be solved entirely by concentrating on isolated aspects of the living organism. Accordingly the book contains a considerable amount of original thought on biological organization, particularly on its cytoplasmic or epigenetic aspects. These thoughts gain momentum since they come from an author who is himself exceedingly well acquainted with the intimate molecular workings of the plant organism.

The book is beautifully illustrated with numerous line drawings and photographs, many of which are taken from the author's own work. The work is concluded by a bibliography of 32 pages (with references to chapters), and an extensive alphabetical index.

66 THE PHYSIOLOGY OF PLANT GROWTH AND DEVELOPMENT
1969

Editor: M. B. Wilkins
695 pp., 160 figs., 35 tbs.

McGraw-Hill
Maidenhead, Berks.
SBN 07 094088 6
Price: £ 6.6.0

Contents: 1. The auxins (K. V. Thimann); 2. The gibberellins (R. E. Cleland); 3. The cytokinins (J. E. Fox); 4. Transport of plant growth regulators (M. H. M. Goldsmith); 5. Apical dominance (I. D. J. Phillips); 6. Geotropism (L. J. Audus); 7. Phototropism (G. M. Curry); 8. Nastic responses (N. G. Ball); 9. The movements of stomata (O. V. S. Heath and T. A. Mansfield); 10. Photosynthesis (B. Kok); 11. Translocation of nutrients (M. Zimmermann); 12. The water relations of plants (J. Dainty); 13. The ionic relations of plants (J. Dainty); 14. Phytochrome (H. W. Siegelman); 15. Photomorphogenesis (H. Mohr); 16. Photoperiodism and vernalization (W. S. Hillman); 17. Germination and dormancy (P. F. Wareing); 18. Circadian rhythms in plants (M. B. Wilkins)

This collaborative text-book of whole-plant physiology was written by 18 authors; nine Americans, eight Britons, and one German. It is aimed at advanced undergraduate and postgraduate students who have a sophisticated general appreciation of plant physiology and plant biochemistry. Separate chapters on various aspects of plant biochemistry have been omitted because a number of advanced text-books are already available in this field.

The subjects of morphogenesis, cellular differentiation, and differential

gene activation are not discussed separately, but of course appear in several chapters because they are inseparable components of whole-plant physiology. The only chapter in which they are discussed at length is that on photomorphogenesis by H. Mohr.

The book is produced in very good offset print. It is illustrated with line drawings but has no photographs. Each chapter has its own extensive bibliography, very conveniently subdivided into selected further reading and papers cited in the text. The book is concluded by a detailed subject index.

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