8179-45
2-1

Issued by the Hubrecht Laboratory

on behalf of the

Foundation

„General Embryological Information Service"

Janskerkhof 2 - Utrecht - Netherlands

CONTENTS

a) Introduction . . . . . p. 5

b) List of names and addresses with subjects in preparation (alphabetical order) . . . . . p. 7

c) List of institutes with composition of scientific staffs (geographical order) . . . . . p. 140

d) List of subjects with names of investigators (arranged according to organ systems and taxonomic groups) . . . . . p. 173

General division . . . . . p. 173

I Descriptive and comparative embryology . . . . p. 175

II Experimental developmental morphology . . . . p. 184

III Physiology of development . . . . . p. 195

IV Development and genetics . . . . . p. 207

V Development and pathology . . . . . p. 210

VI Regeneration . . . . . p. 213

VII Metamorphosis . . . . . p. 216

VIII Experimental developmental morphology of plants . p. 217

e) New technical methods in developmental biology (arranged according to subjects) . . . . . p. 218

f) "Supply and Demand" Service for laboratory animals . . . p. 223

g) Communications from the Hubrecht Laboratory . . . . . p. 228

I The team work project . . . . . p. 228

II The building project . . . . . p. 228

III The Central Embryological Library (C.E.L.) . . p. 229

IV The Central Embryological Collection of slides and material . . . . . p. 229

V The Photographic Reproduction Service . . . . p. 230

h) Communications of the "Institut International d'Embryologie" (Embryological Section of the I.U.B.S.) . . . . . p. 231

i) Announcements of recently published books on development and related subjects . . . . . p. 234

GENERAL EMBRYOLOGICAL INFORMATION SERVICE

1959

(eighth issue)

Marine Biological Laboratory
LIBRARY
WOODS HOLE, MASS.

ISSUED BY THE HUBRECHT LABORATORY

INTRODUCTION

Subscribers are herewith receiving the eighth full issue, containing the new data collected during 1959.

Up till now the periodical has contained almost exclusively zoological data. The progress of research has shown that, particularly in the field of developmental biology, the distinction between zoology and botany is artificial. Many problems attacked by botanists are closely related to those on which zoologists are working. Therefore the periodical will henceforth embrace developmental biology in general, particularly in so far as its experimental aspects are concerned. For the time being the data on experimental developmental morphology of plants are listed in a separate section of the "List of subjects" (see page 217). The number of data collected this year is still limited, but we expect that it will increase during the coming years. Suggestions for further improvement will be gratefully considered.

Contacts have this time been established with Eastern Germany, and the contacts with India, Czechoslovakia, Hungary and Western Germany have been extended.

From 1950 till 1957 the subscription price has undergone no change, notwithstanding the fact that the coverage and size of the periodical have increased considerably (number of collaborators by about 50 %, number of institutes by about 75 %, and number of pages by about 50 %). Moreover a number of new chapters were opened during this period. In order to keep the periodical "self-supporting", an increase of the subcription price has become unavoidable. As already announced in the Supplement to the seventh issue, *for the coming years the price has been fixed at H.fl. 28.50 (i.e. $ 7.50).*

P. D. NIEUWKOOP

LIST OF NAMES OF ADDRESSES

with Subjects in Preparation

(alphabetical order)

AARON, C. — Lab d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

ABELOOS, M. Prof. — Lab. de Zool. génér. de la Fac. des Sci. et Stat. marine d'Endoume (Marseille), Place Victor Hugo, MARSEILLE, France

ABERCROMBIE, M. B.Sc., M.A., F.I.I.E. — Dept. of Embryol., Univ. Coll. London, Gower St., LONDON W.C 1, England

a. Transplantation experiments on blastoderm tissue culture. *Gallus domesticus (Aves)*
b. Study of cell relations in tissue culture. *Gallus domesticus (Aves)*
c. Healing of skin wounds. *Rattus* spec., *Cavia* spec. *(Rodentia)*, *Oryctolagus* spec. *(Lagomorpha)*

ADAMS, Miss E. C. B.A. — Dept. of Pathol., Harvard Med. School, 25 Shattuck St., BOSTON 15, Mass., U.S.A.

a. Histochemical observations on early fertilized ova of less than 14 days age. *Homo sapiens (Primates)* (in collaboration with J. ROCK, W. J. MULLIGAN and A. T. HERTIG)
b. Histochemical studies on developing embryos. *Homo sapiens (Primates)* (in collaboration with A. T. HERTIG and D. G. McKAY)
c. Histochemical studies on abnormal trophoblast with special reference to hydatidiform mole and chorionepithelioma. *Homo sapiens (Primates)* (in collaboration with D. G. McKAY, K. BENIRSCHKE and A. T. HERTIG)

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

ADELMANN, H. B. Dr., F.I.I.E., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y., U.S.A.

a. Working on a book to be entitled "Marcello Malpighi and the evolution of embryological thought".

ADHIKARI, S. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Effects of mitosis-inducing substances on differentiation. *Gallus gallus (Aves)*
b. Effects of cell free proteins on differentiation. *Gallus gallus (Aves)* (in collaboration with S. MOOKERJEE, Miss B. NURJEHAN and S. GHOSAL)

AGRELL, I. P. S. Fil.Dr., Prof. — Zoophysiol. Inst., Univ. of Lund, LUND, Sweden

a. Mitotic activities in relation to differentiation.
b. Nuclear changes during karyogamy.

ÅKESSON, B. Fil.dr. — Embryol. Dept., Zool. Inst. of the Univ. of Lund, LUND, Sweden

a. Embryonic development. *Golfingia elongata (Sipunculoideae)*

b. The histological differentiation of the nervous system in larval and post-larval stages. *Harmothoe imbricata (Polychaeta errantia)*

AKETA, K. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Biochemistry of fertilization with special reference to carbohydrate and carboxylic acid metabolism. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)*

b. Cytochemistry and biochemistry of egg mitochondria. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea), Oryzias latipes (Teleostei)*

ALAMELU, Mrs. M. G. B.Sc.(Hons) — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Nucleo-cytoplasmic relationship. *Amoeba* spec. *(Protozoa)* (in collaboration with S. MOOKERJEE, L. WAIDYASEKARA, Miss D. MUKERJI and J. DUTTA)

ALDEN, R. H. Ph.D., Prof. — Div. of Anat., Med. Units, Fac. of Biol. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

a. Study of egg transport and implantation; early development of trophoblast; embryo-maternal relationships during nidation. *Mus* spec. *(Rodentia)*

ALEXANDER, G. M.Agr.Sci. — Div. of Animal Health and Production, C.S.I.R.O., Sheep Biol. Lab., Great Western Highway, (P.O.Box 144 Parramatta), PROSPECT, N.S.W., Australia

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

ALKEMADE, Miss E. C. M. Med.Dra. — Lab. for Cytol. and exper. Histol., Fac. of Med., Univ. of Leyde, Rijnsburgerweg 10, Boerhaavekwartier, LEIDEN, Holland

a. Bone formation of the terminal phalanx. *Gallus gallus (Aves), Oryctolagus cuniculus (Lagomorpha), Homo sapiens (Primates)*

ALLANSON (BAXTER), Mrs. M. B.Sc., Ph.D. — Biol. Dept., Med. School, St. Mary's Hosp., Paddington, LONDON W. 2, England

ALLEN, R. D. B.A., Ph.D., M.I.I.E. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J., U.S.A.

a. Structural, rheological and optical properties of the cytoplasm of amoeboid cells.

b. Structural changes at egg surfaces at fertilization.

ALTSCHUL, R. M.D., Prof. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Canada

AMANUMA, A. M.Sc. — Dept. of Biol., Coll. of Sci., Osaka City Univ., Minami-Ogimati, Kita-ku, OSAKA, Japan

a. Experimental analysis of the development of the primordial germ cells. *(Amphibia)*

b. Hormonal effects on gonadal development. *(Amphibia)*

AMPRINO, R. M. M.D., Prof. — Inst. of human Anat., Fac. of Med., Policlinico, 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)*

d. Histological and histochemical changes in the developing tissues of diminutive eye-bulbs. *Gallus domesticus (Aves)*

AMY, R. L. M.S., Ph.D. — Dept. of Biol., Southwestern at Memphis, MEMPHIS 12, Tenn., U.S.A.

a. Relative sensitivity of various developmental stages to ultraviolet light (photoreactivation studies to be included). *Habrobracon juglandis (Hymenoptera)*

b. Descriptive embryology. *Habrobracon juglandis (Hymenoptera)*

ANCEL, P. A. Dr., F.I.I.E., Prof. (Honor., Emer.) — Inst. de Biol. Physico-Chimique, 13 Rue Pierre Curie, PARIS Ve, France

ANDERS, G. Dr.Phil. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz

a. Developmental genetics.

ANDERSON, J. W. B.A., M.S., Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON 6, Wis., U.S.A.

a. Comparative histophysiology of placentas and fetal membranes, especially protein transfer. *Sus scrofa (Artiodactyla), Geomys bursarius, Rattus norvegicus, Cavia cobaya (Rodentia), Eptesicus fuscus (Chiroptera), Canis familiaris (Carnivora)*

ANDO, S. B.Sc., M.A. — Research Inst. of Environmental Med., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Electrophysiological study of development of nerve system. *Oryzias latipes (Teleostei)*

ANDRES, G. Dr. — Zool. Inst. der Johannes Gutenberg-Univ., Saarstr. 21, MAINZ, Deutschland

a. Untersuchungen von Wachstumskorrelationen. *(Anura), Gallus domesticus (Aves)*

b. Untersuchungen über die Entwicklung von Farbmustern mit Hilfe xenoplastischer Transplantationen. *Bombinator pachypus, Discoglossus pictus, Hyla arborea, Rana esculenta, Xenopus laevis (Anura)*

ANDRES, M. Y. D.V.M., M.Sc. — Dept. of Veter. Anat., Ohio State Univ., COLUMBUS 10, Ohio, U.S.A.

a. Physiology of the developing pineal organ. *(Aves)*

ANDREW, Miss A. M.Sc. — Dept. of Anat., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, South Africa

a. Histochemical changes in heterotopic transplants. *Xenopus laevis (Anura)*

ANDREW, W. Ph.D., M.D. — Dept. of Anat., School of Med., Indiana Univ., 1100 West Michigan St., INDIANAPOLIS 7, Ind., U.S.A.

ANTEUNIS, Miss A. H. J. D.Sc. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium

a. Development of genital tract. *Lebistes reticulatus (Teleostei)*

ANTON, H. J. Dr. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland

a. Die Regenerationsleistungen heteroplastischer Keimblattchimären. *Triturus vulgaris, T. cristatus, T. alpestris (Urodela)*

b. Unverträglichkeitsreaktionen bei heteroplastischen Transplantationen. *Triturus vulgaris, T. cristatus, T. alpestris (Urodela)*

c. Autoradiographische Untersuchungen der Regenerationsprozesse. *(Urodela)*

AOTO, T. M.Sc., Ph.D. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
a. Morphological and physiological studies on neurosecretion. *(Crustacea, Pisces, Amphibia)*
b. Sex differentiation and gonadal development. *(Amphibia)*

ARIËNS KAPPERS, J. M.D., Prof. — Dept. of Anat. and Embryol., State Univ., Oostersingel 69, GRONINGEN, Holland
a. Development of epiphysis. *Mus rattus (Rodentia)*

ARMSTRONG, P. B. B.S., M.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.
a. Function in the developing liver. *Ambystoma punctatum (Urodela), Amiurus nebulosus (Teleostei)*
b. Behavioral responses in developing embryos. *Ambystoma punctatum (Urodela), Amiurus nebulosus (Teleostei)*

ARNDT, E. A. Dr.rer.nat. — Zool. Inst. der Univ. Rostock, Stalinplatz, ROSTOCK, Deutsche Demokratische Republik
a. Morphologie, Histochemie und Physiologie der Oogenese von Süsswasserformen. *(Teleostei)*

ARSLAN, M. M.Sc. — Dept. of Zool., Government Coll., LAHORE, Pakistan
a. Reproduction and development. *Funambulus pennanti (Sciuromorpha, Rodentia)*

ASAYAMA, S. M.Sc., D.Sc., Prof. — Dept. of Biol., Coll. of Sci., Osaka City Univ., Minami-Ogimati, Kita-ku, OSAKA, Japan
a. Effect of steroid hormones upon sex differentiation. Experiments with the method of organ culture. *Mus musculus (Rodentia)*
b. Study on gonad differentiation. *Homo sapiens (Primates)*

ASHLEY, G. T. B.Sc., Ch.B., M.D. — Dept. of Anat., The University, MANCHESTER, England
a. Normal and abnormal development of thoracic and pelvic viscera. Various spp. *(Vertebrata)*
b. Development of Nissl granules in the central nuclei of cranial nerves. *(Vertebrata)*

ASSENMACHER, I. A. Dr. ès Sci., Dr. en Méd. — Lab. d'Histophysiol., Coll. de France, 4 Avenue Gordon Bennett, PARIS 16e, France.
a. Développement et physiologie et l'hypothalamus et de l'hypophyse. *Anas* spec. *(Aves)*

ASTAUROV, B. L. Dr.Biol.Sci., corresp.-member Ac.Sci. U.S.S.R., F.I.I.E., Prof. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Artificial parthenogenesis and experimental polyploidy. *Bombyx mori (Lepidoptera)*
b. Androgenesis, especially interspecific. *Bombyx mori, B. mandarina (Lepidoptera)*
c. Influence of high temperature on developmental processes; heat denaturation of proteins. *Bombyx mori (Lepidoptera)* and many other organisms
d. Differential sensitivity of cell nucleus and cytoplasm to ionizing radiation. *Bombyx mori (Lepidoptera)*

e. Induction of amphidiploidy in interspecific hybrids. *Bombyx mori, B. mandarina (Leptidoptera)* (in collaboration with Miss V. N. VEREJSKAJA)

AUBRY, Miss R. Lic. ès Sci. — Lab. de Biol. génér., Inst. de Zool. et de Biol. génér., Fac. des Sci., 12 Rue de l'Université, STRASBOURG, France

a. Etude de la lignée germinale. *(Amphibia)*
b. Etude de l'hermaphroditisme. *(Gastropoda)*

AUERBACH, R. Ph.D. — Dept. of Zool., Univ. of Wisconsin, Birge Hall, MADISON 6, Wis., U.S.A.

a. Embryonic tissue interactions. *Mus musculus (Rodentia)*

AUSTIN, C. R. B.V.Sc., D.Sc., M.I.I.E. — Nat. Inst. for Med. Research, Mill Hill, LONDON N.W. 7, England

a. Investigations on gametes, fertilization and early development. *(Mammalia)*
b. Fate of spermatozoa in the female genital tract and possible effect on embryonic development. *(Mammalia)*

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

AZOUBEL, R. M.D. — Cadeira de Histol. e Embriol., Fac. de Medicina, Univ. do Recife, Caixa Postal N. 616, RECIFE, Brasil

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)*
c. Implantation of the blastocyst. *(Mammalia)*

BÄCKSTRÖM, S. A. A. Fil.lic. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

BAFFONI, G. M. Dr. Biol. Sci. — Ist. di Anat. comp. "G. B. Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia

a. Growth and differentiation of the nervous cell. *Lampetra* spec. *(Cyclostomata), Trutta* spec., *Brachydanio* spec. *(Teleostei), Rana* spec., *Bufo* spec., *Xenopus* spec., *Bombina* spec., *Triturus* spec. *(Amphibia), Columba* spec., *Gallus* spec. *(Aves), Felis* spec., *Mus* spec., *Rattus* spec. *(Mammalia)*
b. Mitotic ratio in the larval central nervous system. *Bufo bufo, Triturus cristatus (Amphibia)*
c. Chromatoid bodies, heterochromosomes and sex-chromatin. *Potamon fluviatile, Callianassa tyrrhena, Eupagurus prideauxii (Decapoda, Crustacea)*

BAGIŃSKI, S. M.D. — Inst. of Histol. and Embryol., Acad. of Med., Narutowicza 60, ŁODŹ, Poland

a. Investigations of experimentally provoked monstruosities in embryos. *Gallus* spec. *(Aves)*
b. Influence of azo-dyes on the development of embryos. *Gallus* spec. *(Aves)*
c. Influence of isotopes on the development of embryos. *Gallus* spec. *(Aves)*

BAGNARA, J. T. B.A., Ph.D. — Dept. of Zool., Univ. of Arizona, TUCSON, Arizona, U.S.A.

a. Various aspects of the development and endocrinology of pigmentation. Many spp. *(Amphibia)*
b. Electron microscopy of inductor systems. *Gallus domesticus (Aves)*

BAILEY, J. C. A.B., M.A., Ph.D. — Lab. of Perinatal Physiol., NINDB, School of Med., SAN JUAN, P.R., U.S.A.

BAKER, Miss B. I. B.Sc. — Dept. of Zool., Bedford Coll., Regent's Park, LONDON N.W. 1, England

a. Development of pituitary. *Herichthys cyanoguttatus (Cichlidae, Teleostei)*

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

a. An electron microscopic study of the interconnection of cells in early embryos. *(Echinoidea; Amphibia)*

BALTUS, Miss E. J. Dr. en Sci. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

a. Study on isolated nucleoli. *Asterias rubens (Asteroidea, Echinodermata)*

BALTZER, F. Dr., Dr.h.c. Strassb., Dr.h.c. Freib. (Baden), F.I.I.E., Prof. (Emer.) — Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

a. Biochemical studies on hybrids. *(Echinoidea)* (in collaboration with P. S. CHEN, Zürich)

BANARJEE, M. — Cell Research Unit, Dept. of Zool., Calcutta Univ., 35 Ballygunje Circular Road, CALCUTTA 19, India

a. Effect of neurohormones on development and metamorphosis. *Bombyx mori, Chrysocoris stolli, Macroceroea grandis* and other spp. *(Insecta)* (in collaboration with D. N. GANGULY, D. N. SARKAR, P. BANARJEE, D. DEV and B. BOSE)

BANARJEE, P. — Cell Research Unit, Dept. of Zool., Calcutta Univ., 35 Ballygunje Circular Road, CALCUTTA 19, India

a. Effect of neurohormones on development and metamorphosis. *Bombyx mori, Chrysocoris stolli, Macroceroea grandis* and other spp. *(Insecta)* (in collaboration with D. N. GANGULY, D. N. SARKAR, D. DEV, M. BANARJEE and B. BOSE)

BANERJEE, B. M.Sc. — Dept. of Biol., Scottish Church College, 4, Cornwallis Square, CALCUTTA 6, India

a. Descriptive embryology, and distribution of alkaline and acid phosphatase during embryogenesis. *Odontotermes redemanni (Isoptera)*

b. Cytochemical studies during postembryonic growth. *Odontotermes redemanni (Isoptera)*

BANERJEE, S. B.Sc. (Hons) — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Environmental factors in egg-laying and development. *Bruchus* spec. *(Coleoptera)*

BANTOCK, C. R. B.A. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England

a. Causes and effects of chromosome elimination during development. *(Cecidomyidae, Diptera)*

BARASA, A. — Ist. di Anat. veter., Via Nizza 52, TORINO, Italia

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

BARBIERI, F. D. Dr. — Inst. de Biol. Gener. y Embriol. Exper., Casilla De Correos 193, TUCUMAN, Argentina

a. Cytochemical effects of ultraviolet radiation on the developing embryo. *Gallus* spec. *(Aves)*

b. Metachromasia in vivo. *Phyllomedusa sauvagii (Anura), Gallus domesticus (Aves)*
c. Nucleic acids during neural tube closure. *Phyllomedusa sauvagii (Anura), Gallus domesticus (Aves)*

BARIGOZZI, C. Dr. Sci., Prof. — Ist. di Genet., Univ. di Milano, Via Celoria 10, MILANO, Italia
a. Development of melanomes with different genotypes. *Drosophila* spec. *(Diptera)*

BARRY, T. H. D.Sc. — Dept. of Zool., Fac. of Sci., Univ. of Pretoria, PRETORIA, South Africa

BARTELMEZ, G. W. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Blood supply of uterus. *Macaca mulatta (Primates)*
b. Early development of optic vesicle. *(Rodentia, Primates)*
c. Earliest development of oral hypophysis. *(Primates)*
d. Effects of rubella on foetus. *Homo sapiens (Primates)*

BARTH, L. G. A.B., Ph.D., F.I.I.E., Prof. — Dept. of Zool., Columbia Univ., Broadway and 116th St., NEW YORK 27, N.Y., U.S.A
a. Control of differentiation of embryonic cells in vitro. *Rana pipiens (Anura)* (in collaboration with L. G. BARTH)

BARTH, Mrs. L. JAEGER A.B., M.A., Ph.D. — Dept. of Zool., Columbia Univ., Broadway and 116th St., NEW YORK 27, N.Y., U.S.A.
a. Control of differentiation of embryonic cells in vitro. *Rana pipiens (Anura)* (in collaboration with L. G. BARTH)

† BAST, T. H. B.A., Ph.D., Prof. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON 6, Wis., U.S.A.
(deceased)

BATTAGLIA, B. Sc.D. — Ist. di Zool. e Anat. comp., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. Sex differentiation. *(Harpacticoida, Copepoda)*
b. General embryology. *(Harpacticoida, Copepoda)*

BATTLE, Miss H. I. Ph.D., Prof. — Dept. of Zool., Univ. of Western Ontario, LONDON, Ont., Canada
a. Effects of purines and purine antagonists on early developmental processes. *Salmo trutta fario, Brachydanio rerio (Teleostei)*
b. Effects of aminopterin on early developmental processes. *(Teleostei)*

BAUD, C. A. Dr.Méd., Prof. — Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue Ecole de Méd., GENÈVE, Suisse

BAUMANN, J. A. Dr., Prof. — Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue Ecole de Méd., GENÈVE, Suisse
a. Etude descriptive du développement de l'innervation du coeur. *Gallus* spec. *(Aves)* (en collaboration avec J. GALLERA)
b. Développement du noyau tangentiel du nerf vestibulaire et de l'oreille. *Gallus* spec. *(Aves)* (en collaboration avec J. GALLERA)

BAUTZMANN, H. Dr. Med., Prof. — Anat. Inst. der Univ., U.K.E. Martinistr. 52, HAMBURG 20, Deutschland
a. Entwicklungsphysiologie der Primitiventwicklung. *(Vertebrata,* bes. *Amphibia)*
b. Vergleichende Histofunktion, Histogenese und Histophysiologie der Amnioneinrichtungen. *(Amniota)*
c. Fruchthüllenmotorik und Motorik des Embryo. *(Evertebrata, Vertebrata)*

BAXTER, E. W. B.Sc., Ph.D. — Biol. Dept., Guy's Hosp. Med. School, LONDON, S.E. 1, England
- a. Biology, including development and metamorphosis. *Petromyzon* spec. *(Cyclostomata)*
- b. Chromosome numbers. *Lampetra planeri, L. fluviatilis (Cyclostomata)*
- c. Food changes during larval period of growth. *Ammocoetes (Cyclostomata)*
- d. Uptake and fate of "Thorotrast". *Ammocoetes (Cyclostomata)*

BEAM, J. R. M.B., B.S. — Anat. Dept., Middlesex Hosp. Med. School, LONDON W. 1, England
- a. Physiology of foetal kidney. *Rattus* spec. *(Rodentia)* (in collaboration with F. T. C. HARRIS)

BEARD, R. G. A.B., M.A. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
- a. An immunological analysis of the temporal and spatial appearance of the hemoglobin molecule in the developing embryo. *Gallus domesticus (Aves)*

BEATTY, R. A. B.A., M.A., Ph.D., M.I.I.E. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland
- a. Heteroploidy and parthenogenesis. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
- b. Breeding of genetically tagged strains for use in experimental embryology. *Oryctolagus cuniculus (Lagomorpha)*
- c. Heterospermic insemination and growth of embryo. *Oryctolagus cuniculus (Lagomorpha)*
- d. Developmental biology and genetics of gametes. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

BEAUDOIN, A. R. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Florida, U.S.A.
- a. Teratology.

BEAUPAIN, R. R. B.Sc. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland
- a. Analysis of the period(s) of neural competence of the ectoderm for activation and transformation. *Ambystoma mexicanum (Urodela)*

BECKER, U. Dr. rer. nat. — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland
- a. Experimente zur Analyse der Induktionsstoffe. *(Amphibia)*

BEDNJAKOVA, Mrs. T. A. Cand. Biol. Sci. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
- a. Influence of high temperatures on developmental processes. *Bombyx mori (Lepidoptera)*
- b. Analysis of sterilizing effect of sublethal high temperature on eggs infected with Nosema bombycis. *Bombyx mori (Lepidoptera)* (in collaboration with Miss V. N. VEREJSKAJA)
- c. Action of DNA on morphogenesis. *Bombyx mori (Lepidoptera)* (in collaboration with G. I. GINZBURG and Mrs. G. P. RAMENSKAIA)

BEESON, Miss G. E. B.A. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England
- a. Production and effects of polyploidy. *Limnaea stagnalis (Pulmonata, Gastropoda)*

BELKA, A. Mgr. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Restoration of the surrenal gland after experimental injury.
b. Transplantation of the ovary. *Mus musculus (Rodentia)*

BELL, E., Jr. Dr. — Dept. of Biol., Massachusetts Inst. of Technol., CAMBRIDGE 39, Mass., U.S.A.

BELLAIRS (MORGAN), Mrs. M. R. B.Sc., Ph.D. — Dept. of Zool. and Comp. Anat., St. Bartholomew's Hosp. Med. Coll., Charterhouse Square, LONDON E.C. 1, England
a. An electron microscopical study of intra-cellular yolk drops and mitochondria. *Gallus domesticus (Aves)*
b. An electron microscopical study of the primordial germ cells. *Gallus domesticus (Aves)*

BELLUOMINI, H. — Instituto Butantan, SÃO PAULO, Brazil
a. Intersexuality. *Bothrops insularis (Ophidia)* (in collaboration with A. HOGE and G. SCHREIBER, Belo Horizonte)

BELOFF, Mrs. R. HIRSCH B.A., Ph.D. — Dept. of Pathol., School of Med., Yale Univ., 310 Cedar St., NEW HAVEN, Conn., U.S.A.
a. Immunochemical and biochemical analysis of differentiating lens. *Gallus domesticus (Aves)*

BENAZZI, M. M.I.I.E., Prof.ord. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Fertilization, pseudogamy, polyploidy and heredity. *(Tricladidea, Turbellaria)*
b. Hybrids. *Triturus vulgaris* x *T. cristatus, T. italicus* and *T. helveticus (Urodela)*
c. Action of X-rays on development. *(Planariidae, Turbellaria)*

BENAZZI (LENTATI), Mrs. G. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Ovo- and spermatogenesis; fertilization and cytology. *(Tricladidea, Turbellaria)*

BENGMARK, S. Med.lic. — Dept. of Anat., Univ. of Gothenburg, GÖTEBORG, Sweden
a. Derivation of prostatic gland. *Homo sapiens, Rattus* spec. *(Mammalia)*

BENIRSCHKE, K. M.D. — Dept. of Pathol., Harvard Univ., Med. School, 25 Shattuck St., BOSTON 15, Mass., U.S.A.
a. The identification of the hormones produced (if any) by the fetal cortical zone of the adrenal gland. *Homo sapiens (Primates)*
b. Histochemical studies on abnormal trophoblast with special reference to hydatidiform mole and chorionepithelioma. *Homo sapiens (Primates)* (in collaboration with D. G. McKAY, A. T. HERTIG and Miss E. C. ADAMS)

BENNETT, Miss D. Ph.D. — Dept. of Zool., Columbia Univ., Broadway and 116th St., NEW YORK 27, N.Y., U.S.A.
a. Effects of lethal mutant alleles at the T-locus, studied morphologically, in tissue culture, and with paper chromatography. *Mus musculus (Rodentia)*

BENOIT, J. Dr. en Méd., Dr. ès Sci., Prof. — Lab. d'Histophysiol., Coll. de France, 4 Avenue Gordon Bennett, PARIS 16e, France
a. Action du DNA sur le développement de l'organisme. *(Vertébrés* supérieures)

BENOIT, J. A. A. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

BENZ, G. A. Ph.D. — Zool. Inst. der Univ., Sahlistr. 8, BERN, Schweiz

BER, A. Dr., Prof. — Beilinson Hospital, PETAH-TIKVA, Israel

a. Development of eye reaction to vitamin B_1. *Hyla* spec., *Bufo* spec. *(Anura)*

BERG, G. G. Ph.D. — Dept. of Pharmacol., School of Med., Univ. of Rochester, P.O. Box 287, Sta. 3, ROCHESTER 20, N.Y., U.S.A.

BERG, W. E. A.B., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Cal., U.S.A.

BERGQUIST, H. Ph.D., M.I.I.E. — Zool. Inst., Univ. of Gothenburg, Postgatan 35, GÖTEBORG-C, Sweden

a. Experimental investigations on the neural tube. *(Vertebrata)*
b. Ultramicroscopical investigations on the integument. *Homarus astacus (Crustacea)*

BERMANN, F. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Recherches sur les hétérogreffes embryonnaires, la compatibilité et les affinités des tissus embryonnairs en associations xénoplastiques. *Gallus gallus (Aves), Mus musculus albinus (Rodentia)*

BERNSTEIN, G. S. B.A., M.A., Ph.D. — Dept. of Pharmacol., School of Med., Univ. of Southern California, LOS ANGELES, Cal., U.S.A.

a. Life-span, motility and metabolism of spermatozoa. *(Echinodermata, Amphibia, Mammalia)*
b. Physiology of fertilization. *(Amphibia)*

BERRILL, N. J. Ph.D., D. Sc., Prof. — Dept. of Zool., McGill Univ.. MONTREAL, Quebec, Canada

BERTMAR, G. Fil.lic. — Zootom. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden

a. Development and morphology of the skeleton of the head. *(Characidae, Teleostei)*

BIEBER, S. B.A., M.S., Ph.D. — Section of Biol., The Wellcome Research Labs., TUCKAHOE 7, Westchester County, N.Y., U.S.A.

a. Nucleic acid metabolism during gametogenesis, embryogenesis and regeneration; studies carried out with aid of analogues of purines and pyrimidines, and with radioisotope-labeled nucleic acid derivatives. *Rana pipiens (Anura)*

BIELAŃSKA (OSUCHOWSKA), Mrs. Z. Dr. — Inst. of Histol. and Embryol., Veter. Fac., ul. Grochowska 272, WARSZAWA, Poland

a. Histochemical studies on differentiation of gonads. *Sus domestica (Artiodactyla)*
b. Histochemical studies on oogenesis and embryonic development. *Cordylophora lacustris (Hydroidea)*

BIELIAVSKY, N. Lic. en Sci. Zool. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

a. Réagregation d'embryons dissociés. *Ambystoma mexicanum, Pleurodeles Waltlii, Rana temporaria (Amphibia)*

BIER, K. Dr. rer. nat. — Zool. Inst. der Univ. Würzburg, Röntgenring 10. WÜRZBURG, Deutschland

a. Cytologisch-histochemische Untersuchungen über das Wachstum der Oocyten in Beziehung zur Embryonal- und Postembryonalentwicklung. *Daphnia* spec. *(Cladocera, Crustacea), Calliphora erythrocephala (Diptera)*

BIJTEL, Miss J. H. Dr. Sci., M.D., M.I.I.E. — Dept. of Anat. and Embryol., State Univ., Oostersingel 69, GRONINGEN, Holland

a. Experiments concerning the factors which determine the normal course of the outgrowing pronephric duct. *Ambystoma mexicanum, Triturus taeniatus, Xenopus laevis (Amphibia)*
b. Development and phylogenetic origin of the columella auris. *Ambystoma mexicanum, Triturus taeniatus, Xenopus laevis (Amphibia)*
c. Development of the naso-lacrimal duct. *Xenopus laevis (Anura)*
d. Development of the naso-lacrimal duct. *Mus musculus albinus (Rodentia)*
e. Development of the corpus callosum. *Felis domestica (Carnivora), Mus musculus albinus (Rodentia)*

BILEWICZ, S. Dr.Phil., Prof. — Zakład Embriol. U.W., Krakowskie Przedmieście 26/28, WARSZAWA, Poland

a. Experimental study on the genesis of superfoetation. *Mus musculus* alb. *(Rodentia)*

BILLETT, F. S. B.Sc., Ph.D. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C. 1, England

a. Morphogenetic effects of desoxyribonucleic acid. *Ambystoma mexicanum, Xenopus* spec. *(Amphibia)*

BILLINGHAM, R. E. M.A., Ph.D., D.Sc. — Wistar Inst., 36th St. at Spruce, PHILADELPHIA 4, Pa., U.S.A.

a. Acquired tolerance and its role in tissue transplantation. *Mus* spec., *Rattus* spec. (various inbreed strains) *(Rodentia)*
b. Hair neogenesis in antlers. Common Virginia deer *(Artiodactyla)*

BIRGE, W. J. B.A., M.S., Ph.D. — Dept. of Zool., Oregon State Coll., CORVALLIS, Ore., U.S.A.

BISHOP, D. W. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.

a. Physiology and metabolism of spermatozoa. *(Mammalia)*
b. Intra-tubal factor influencing sperm motility and transport. *(Mammalia)*
c. Contractile protein and contractile mechanisms of spermatozoa. *(Mammalia)*

BISHOP, M. W. H. M.A., Ph.D. — Roy. Veter. Coll., Royal College St., LONDON N.W. 1, England

a. Investigations on gametes, gametogenesis, fertilization and early development. *(Mammalia)*

BLACK, R. E. L. B.A., Ph.D. — Dept. of Embryol., Div. of Biol., Calif. Inst. of Technol., PASADENA 4, Cal., U.S.A.

a. Antigens in marine embryos. *(Echinodermata)*
b. Metabolism of marine embryos. *(Gephyrea, Echinodermata)*

BLACKLER, A. W. C. B.Sc., Ph.D. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England

a. Transplantation of germ-cells using a cytological "marker". *Xenopus laevis (Anura)*
b. Transplantation of germ-cell nuclei into enucleated eggs. *Xenopus laevis (Anura)*

BLECHSCHMIDT, E. Dr.Med., Prof. — Anat. Inst. der Univ., Burgstr. 51, GÖTTINGEN, Deutschland
a. Elektronenmikroskopische Untersuchungen am Nervensystem. *Gallus* spec. *(Aves)*

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

BLUNTSCHLI, H. Dr., F.I.I.E., Prof. (Emer.)— Anat. Inst., Bühlstr. 26, BERN, Schweiz
(no embryological work in progress)

BODEMER, C. W. B.A., M.A., Ph.D. — Dept. of Anat., School of Med., Univ. of Washington, SEATTLE 5, Wash., U.S.A.

BODENSTEIN, D. Ph.D., M.I.I.E. — Nat. Insts. of Health, Gerontol. Branch Baltimore, City Hospitals, BALTIMORE 24, Md., U.S.A.
a. Nerve regeneration. *Periplaneta americana (Orthoptera)*
b. The role of the corpus allatum hormone in the maturation of eggs. *Culex* spec. *(Diptera)*
c. Intergeneric grafts of organ discs. *(Diptera)*
d. The role of the prothoracic gland in postembryonic development. *Periplaneta americana (Orthoptera)*

BODIN, N.-O. Fil.kand. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden
a. The mechanism of agglutination of spermatozoa. *(Mammalia)* (in collaboration with P. E. LINDAHL, R. BRATTSAND, E. NORDLING, L.-O. THUNQVIST and G.-UHLIN)

BOELL, E. J. Ph.D., M.A., D.Sc., M.I.I.E. — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.
a. Changes in mitochondria during development. *(Amphibia)*
b. Enzyme development in the central nervous system. *(Amphibia; Aves)*
c. Functional differentiation of respiratory structures. *(Amphibia)*
d. Ion uptake by the larval gills. *Ambystoma punctatum (Urodela)*

BOERSMA, W. Med. Drs. — Anat.-Embryol. Lab., State Univ., Janskerkhof 3, UTRECHT, Holland
a. The induction of the primitive streak. *Anas boschas* (Khaki Campbell) *(Aves)*

BOK, S. T. Dr., Prof. — Netherlands Central Inst. for Brain Research, Mauritskade 59B, AMSTERDAM O., Holland

BOLOGNARI, A. — Ist. di Zool., Univ. di Messina, MESSINA, Italia
a. Ricerche sull'ovogenesi. Particolari osservazioni sul nucleolo mediante il microscopio ottico ed elettronico. *Haliotis lamellosa, Aplysia depilans, Patella coerulea (Gastropoda), Mytilus galloprovincialis (Lamellibranchia)*

BONDI, C. Dott., Prof. — Ist. di Biol. gen., Fac. di Med., S. Pietro, PERUGIA, Italia
a. Rigenerazione. *Planaria lugubris (Turbellaria)*
b. Trapianti xenoplastici e differenziazione. *Triturus* spec., *Rana* spec. *(Amphibia)*
c. Morfogenesi dell'intestino. *Bufo* spec., *Rana* spec. *(Anura)*

BONICHON, Miss A. Lic. ès Sci. — Lab. de Physiol. Génér., 30 Rue Sainte-Cathérine, NANCY, France

a. Recherches expérimentales sur le développement cytochimique des lobes optiques. *Gallus domesticus (Aves)* (en collaboration avec J. F. GAYET)

b. Recherches expérimentales sur le développement cytochimique et biochimique de la cellule nerveuse. *Gallus domesticus (Aves)*

c. Développement de la fibre musculaire striée (cytochimie). *Gallus domesticus (Aves)*

BONNER, J. T. Ph.D. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J., U.S.A.

a. Problems of morphogenetic movements and differentiation. *(Acrasiales)*

BONS, J. Lic.ès Sci. — Lab. de Biol. Anim., Centre d'Etudes Sup. Sci., Avenue Biarnay, RABAT, Maroc

BOOKHOUT, C. G. A.B., M.A., Ph.D., Prof. — Dept. of Zool., Duke Univ., DURHAM, N.C., U.S.A

a. The development from the egg to the sixty-day stage. Egg deposition, culture methods, day to day observations and records of living larvae and juveniles, study of fixed and sectioned material. *Marphysa regalis (Polychaeta)*

b. Larval development and the effect of variations in temperature, salinity, and diet on molting frequency and time of development. *Balanus* spp. *(Cirripedia, Crustacea)*

c. Effects of various temperatures and salinities on molting frequency, larval stages and metamorphosis. *Uca pugilator, Callinectes sadipus, Libinia dubia, Sesarma cinerea, Panopeus herbstii, Eurypanopeus depressus (Decapoda, Crustacea)*

BORDEN, J. van der — Div. of exp. Morphol., Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM-O, Holland

a. Experiments designed to test relations of some inhibitors of embryonic development to the effect of X-rays. *(Urodela; Rodentia)* (in collaboration with H. A. L. TRAMPUSCH)

BORGHESE, E. M.D., Ph.D., M.I.I.E. — Ist. di Istol. Embriol. Gener., Via G. T. Porcell 2, CAGLIARI, Italy

a. Development in vitro of embryonic organs.

BORSTEL, R. C. von Ph.D. — Biol. Div., Oak Ridge National Lab., P.O. Box Y, OAK RIDGE, Tenn., U.S.A.

a. Intersexuality. *Bracon hebetor (Braconidae, Hymenoptera)*

b. Irradiation of the gametes. *Bracon hebetor, Drosophila melanogaster (Insecta)*

BOSCHWITZ, Miss B. D. M.Sc., Ph.D. — Dept. of Zool., Hebrew Univ., JERUSALEM, Israel

a. The parathyroid. *(Anura)*

BOSE, A. M.Sc., D.Phil. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Development of pineal eye. *Calotes versicolor (Lacertilia)*

b. Effect of high voltage electric current on morphogenesis. *Gallus gallus (Aves)*

BOSE, B. — Cell Research Unit, Dept. of Zool., Calcutta Univ., 35 Ballygunje Circular Road, CALCUTTA 19, India

a. Effect of neurohormones on development and metamorphosis. *Bombyx mori, Chrysocoris stolli, Macroceroea grandis* and other spp. *(Insecta)* (in collaboration with D. N. GANGULY, D. N. SARKAR, P. BANARJEE, D. DEV and M. BANARJEE)

BOTERENBROOD, Miss E. C. M.Sc. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland
a. Organization of prosencephalic structures after dis- and re-aggregation of the prosencephalic part of the neural plate. *Triturus alpestris, Pleurodeles Waltlii (Urodela)*

BOUIN, P. Dr., Prof. (Emer.) — VENDRESSE, Ardennes, France

BOUNOURE, L. Prof. — Lab. de Biol. génér., Inst. de Zool. et de Biol. génér., Fac. des Sci., 12 Rue de l'Université, STRASBOURG, France
a. Initial development: primordial germ-cells, development of the gonads. *(Amphibia)*

BÖVING, B. G. A.B., M.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Blastocyst spacing, orientation and implantation mechanisms. *Oryctolagus cuniculus (Lagomorpha)*
b. Relation of trophoblast invasion to bloodvessels underlying uterine epithelium, and the anatomical and chemical basis for it. *Oryctolagus cuniculus (Lagomorpha)*
c. Identification and function of non-cellular blastocyst coverings. *Oryctolagus cuniculus (Lagomorpha)*

BOYD, J. D. M.A., M.Sc., M.D., F.I.I.E., Prof. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England
a. The development and structure of the placenta. *Homo sapiens (Primates)* (in collaboration with W. J. HAMILTON)

BOYDEN, E. A. Ph.D., Prof. — (Emer. Prof.) Inst. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS 14, Minn., U.S.A.
— (Research Prof.) Med. School, Univ. of Washington, SEATTLE 5, Wash., U.S.A.

BOYER, C. C. B.S., M.A., Ph.D. — Dept. of Microanat., School of Med., Med. Center, W. Virginia Univ., MORGANTOWN, W.Va., U.S.A.
a. Structure of the renal glomerulus. *(Mammalia)*
b. Morphological changes in pathological renal glomeruli, by plastic reconstruction.

BRACHET, J. L. A. M.D., D.Sc., F.I.I.E., Prof. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
a Studies on the metabolism of lethal hybrids. *(Amphibia)*
b. Role of -SH groups in morphogenesis. *(Amphibia)*
c. Action of chemical analogues of purines and pyrimidines on development. *(Amphibia)*
d. Studies on lysosomes in developing embryos. *(Amphibia, Aves)*

BRADEN, A. W. H. M.Sc., Ph.D. — Div. of Animal Health and Production, C.S.I.R.O., Sheep Biol. Lab., Great Western Highway (P.O. Box 144, Parramatta), PROSPECT, N.S.W., Australia
a. Fertilization; interaction between sperms; genetic differences in the morphology and physiology of the gametes. *Mus musculus (Rodentia)*
b. Effect of age of gametes on development. *Ovis* spec., *Rattus norvegicus, Oryctolagus cuniculus (Mammalia)*

BRAHMA, S. K. M.Sc., D.Phil., Ph.D. — Dept. of Zool., Bangabasi Coll., 19 Scott Lane, CALCUTTA 9, India

a. Study on the process of evocation with special reference to diffusion. *Triturus alpestris, Xenopus laevis, Ambystoma* spec. *(Amphibia)*
b. Lens induction. *Xenopus laevis (Amphibia)*
c. Transfer of substances during induction. *(Amphibia)*
d. Normal tables of Indian forms. *Rana tigrina, R. limnocharis, Bufo melanostictus, B. stomaticus (Anura)*
e. Reactivity of Indian forms to various inducing substances. *(Ranidae, Bufonidae, Anura)*
f. Development of the vertebral column. *Homo sapiens (Primates)* (in collaboration with D. N. GANGULY)

BRAMBELL, F. W. R. B.A., Ph.D., D.Sc., F.R.S., F.I.I.E., Prof. — Agr. Res. Council Unit of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
a. Immunological relations of mother and young. *(Mammalia)*

BRANDOM, W. F. A.B., M.A., Ph.D. — Zool. Dept., Newcomb Coll., Tulane Univ., NEW ORLEANS 18, Louisiana, U.S.A.
a. Combined heteroploidy and hybridization; chromosome number; gene-dosage studies in polyploid hybrids; tissue and organ architecture in heteroploids; the origin of, and routes to, heteroploidy; species pigment pattern formation; the karyo-plasma problem. *Taricha* spec. *(Urodela)*
b. Interspecific and intergeneric diploid hybridization; studies of the early arrest of development in diploid intergeneric hybrids. *Taricha* spec., *Diemictylus* spec. *(Urodela)*

BRATTSAND, R. L. Fil.mag. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden
a. The mechanism of agglutination of spermatozoa. *(Mammalia)* (in collaboration with P. E. LINDAHL, N.-O. BODIN, L. O. THUNQVIST, E. NORDLING and G. UHLIN)

BRAUCKMAN, Miss E. S. — Inst. de Biol. Gener. y Embriol. Exper., Casilla de Correos 193, TUCUMAN, Argentina
a. Sulphydryl groups during neural tube closure. *Gallus domesticus (Aves)*

BRETSCHNEIDER, L. H. Dr., Prof. — Centrum voor Electronenmicroscopie, Janskerkhof 3, UTRECHT, Holland
a. Pathogenesis of egg cells. *Limnaea stagnalis (Gastropoda)*

BREWIN, B. I. M.Sc. — Dept. of Zool., Univ. of Otago, DUNEDIN, New Zealand
a. Embryology and life history of a truly viviparous compound form. *Hypsistozoa fasmeriana (Ascidia)*
b. The development of larval buds. *Hypsistozoa fasmeriana (Ascidia)*

BRICE, Miss M. C. B.A. — Dept. of Zool., Gibbs Research Labs., Yale Univ., NEW HAVEN, Conn., U.S.A.
a. The structural role of mesenchyme in the epithelial differentiation of the submandibular gland; i n v i v o and i n v i t r o studies. *Mus musculus (Rodentia)*

BRIEN, P. L. Dr.Sci.Zool., F.I.I.E., Prof. — Lab. de Zool., Fac. des Sci., Inst. de Zool. Torley-Rousseau, Univ. libre de Bruxelles, 50 Avenue F. D. Roosevelt, BRUXELLES, Belgique

BRIGGS, R. W. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.
a. Studies on nuclear differentiation in embryos. *Rana pipiens (Anura)* (partly in collaboration with T. J. KING)

b. Nuclear transplantation (preliminary studies). *Ambystoma mexicanum (Urodela)*
c. Cytological studies on a maternal effect in blastulae. *Ambystoma mexicanum (Urodela)* (in collaboration with R. R. HUMPHREY)

BRITT, Miss L. G. B.S., M.S. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn. U.S.A.
a. Biochemical analysis of protein synthesis in cornea and sclera. *Gallus* spec. *(Aves)* (in collaboration with H. HERRMANN)

BRODOWA, Mrs. Ch. GRABIE M.Ph. — Giwat Hashlosha, PETAH-TIKVA, Israel

BROEK, A. J. P. v. d. F.I.I.E., Prof. (Emer.) — Biltstraat 109, UTRECHT, Holland

BRØNDSTED, H. V. Dr. Phil., F.I.I.E., Prof. — Inst. for Alm. Zool., Universitetsparken 3, COPENHAGEN Ø, Denmark
a. Regeneration. *(Planariidae, Plathelminthes)*
b. Developmental physiology. *Spongilla* spec. *(Porifera)*
c. Development of the brain. *(Mammalia)*

BROOKBANK, J. W. B.A., M.S., Ph.D. — Dept. of Biol., Univ. of Florida, GAINESVILLE, Florida, U.S.A.
a. Effects of antisera on egg metabolism. *Lytechinus variegatus (Echinoidea)*
b. Localization of antigens within the unfertilized egg. *Strongylocentrotus purpuratus (Echinoidea)*
c. Sperm depolymerase. *Mellita quinquiesperforata (Clypeastroidea, Echinoidea)*

BROOKES, M. M.A., B.M., B.Ch. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL 3, England
a. Development of vascular organisation in foetal bone. *(Mammalia)*

BROUANT, J. F. Lic.ès Sci. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France
a. Action de certaines substances chimiques sur la cyto-différenciation embryonnaire. *(Amphibia)*

BROUWER, P. J. Med.Drs. — Anat.-Embryol. Lab. of the Univ., Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Development of thyroid gland and teeth (investigations with radio-active isotopes). (in collaboration with J. DANKMEIJER)

BROWN, J. W. A.B., M.A., Ph.D. — Dept. of Anat., School of Med., Univ. of Missouri, COLUMBIA, Mo., U.S.A.
a. Development of the nucleus of the spinal tract of trigeminal nerve. *Homo sapiens (Primates)*

BRUNST, V. V. Dr.Biol. — Roswell Park Memorial Inst., 666 Elm St., BUFFALO 3, N.Y., U.S.A.

BRYAN, J. H. D. B.Sc., M.A., Ph.D. — Dept. of Genetics, Iowa State Coll., AMES, Iowa, U.S.A.
a. Cytochemical studies of gamete formation. *Mus musculus (Rodentia)*
b. Cytochemical studies of X-ray effects on mitosis and meiosis. *Mus musculus (Rodentia)*
c. X-ray induced chromosome-translocation effects. *Mus musculus (Rodentia)*
d. Nucleic acid-protein ratios during growth and differentiation. *Mus musculus (Rodentia)*

BUCHANAN, G. D. B.A., M.A., Ph.D. — Div. of Anat., Med. Units, Fac. of Biol. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.
a. Mechanism of delayed implantation; experimental implantation during delay. *Dasypus novemcinctus (Xenarthra)*

BÜCKMANN, D. Dr.rer.nat. — Zool. Inst. der Univ., Berlinerstr. 28, GÖTTINGEN, Deutschland
a. Entwicklungsphysiologie der Metamorphose. *(Insecta)*

BULMER, D. M.A., M.D. — Dept. of Anat., Marischal Coll., ABERDEEN, Scotland
a. Placental hormones, cytochemistry of placenta, implantation, metabolism of cleaving ova. *(Rodentia)* (in collaboration with A. D. DICKSON)

BUÑO, W. B.Sc., Ph.D., Prof. — Dept. de Histol. y Embriol., Fac. de Med., MONTEVIDEO, Uruguay, S. America

BURDON-JONES, C. B.Sc., Ph.D. — Marine Biol. Station, Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales
a. Embryology. *(Hemichordata, Gastropoda)*

BURNS, R. K. A.B., Ph.D., F.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Mechanisms of sex differentiation as studied experimentally. *Didelphis virginiana (Marsupialia)*

BUTLER, E. G. Ph.D., D.Sc., F.I.I.E., Prof. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J., 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. Regression (reduction) and subsequent reconstitution. *Clavelina lepadiformis (Tunicata, Urochordata)*
c. Effects of ultraviolet radiation on limb development and limb regeneration. *(Urodela)*
d. Problems of polarity in the limb. Regeneration after reversal of the proximo-distal axis. *(Urodela)*

BUTLER, H. M.A., M.D., B.Chir. — Dept. of Anat., Kitchener School of Med., Univ. of Khartoum, KHARTOUM, Sudan
a. The reproductive cycle and early development. *Galago senegalensis senegalensis (Primates)*
b. The development of the intestine. *Hyrax* spec. *(Hyracoidea)*

BUTROS, J. M. M.A., Ph.D. — Biol. Dept., American Univ., BEIRUT, Lebanon
a. Cytoplasmic viscosity in the egg during suppressed respiration. *(Echinoidea)*
b. Stimulation of cleavage with desoxyribonucleic acid fractions. *Arbacia* spec. *(Echinoidea)*

BÜYÜKÖZER, Miss I. M.D. — Morfologi Enstitüsü, Tip Fakültesi, Ege Universitesi, Bornova, IZMIR, Turkey
(no embryological work in progress)

BYCZKOWSKA (SMYK), Mrs. W. Mgr. — Zakład Anat. Porównawczej U.J. im H. Hoyera, św. Anny 6, KRAKOW, Poland
a. Development of respiratory surfaces of gills. *(Salmonidae, Teleostei)*

CAIRNS, J. M. A.B., M.S., Ph.D. — Biol. Station, Roswell Park Memorial Inst., SPRINGVILLE, N.Y., U.S.A.

a. Control of growth and morphogenesis in limb buds. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Origin and control of mechanisms governing feather pattern. *Gallus domesticus (Aves)*
c. Application of control system theory to problems of development.

CALAME, Miss S. M. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Organogenèse du système urogénital. *Gallus gallus (Aves)*

CALLAN, H. G. M.A., D.Sc., Prof. — Dept. of Nat. Hist., Bell Pettigrew Museum, The University, ST. ANDREWS, Fife, Scotland
(no embryological work in progress)

CAMBAR, R. Dr., M.I.I.E., Prof. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351, Cours de la Libération, TALENCE (Gironde), France
a. Etude descriptive et expérimentale de la morphogenèse du mésonéphros. *Rana* spec., *Alytes* spec., *Discoglossus* spec., *Xenopus* spec. *(Anura)*
d. Etude expérimentale de la morphogenèse du tube digestif. *(Anura)* l'uretère primaire. *(Anura)*
c. Involution ou transformations de l'appareil excréteur pendant la métamorphose. *(Anura)*
d. Etude expérimentale de la morphogenèse du tube digestif. *(Anura)*
e. Rapports entre l'appareil génital et l'appareil excréteur. *(Anura)*
f. Recherches descriptives sur le développement. *Gambusia* spec. *(Teleostei)*

CAMOSSO, Miss M. E. Sc.Dr. — Inst. of human Anat., Fac. of Med., Policlinico, BARI, Italy
a. Analysis of the morphogenesis of the wing. *Gallus domesticus (Aves)*

CAMPENHOUT, E. van Dr., F.I.I.E., Prof. — Inst. d'Anat., Univ. de Louvain, 38 Rue des Récollets, LOUVAIN, Belgique
a. Innervation of the lungs.
b. Innervation of the digestive tract.
c. Development of the embryo. *Crocodilus* spec. *(Reptilia)*
d. Development of the visceral nervous system. *Homo sapiens (Primates)*
e. Development of the acoustic nerve. *(Reptilia; Mammalia)*

CANDIOLLO, L. — Ist. di Anat. umana, Fac. di Med., Corso Massimo d'Azeglio 52, TORINO, Italia
a. Sulla colloidopessia dell'entoderma vitellino, dopo le schiuse. *Gallus domesticus (Aves)*
b. Lo sviluppo della parete ossea del canale mandibolare. *Homo sapiens (Primates)*

CARPENTER, Miss E. M.S., Ph.D., D.Sc. — Zool. Dept., Smith Coll., NORTHAMPTON, Mass., U.S.A.
a. Organ culture especially of embryonic thyroid gland.
b. Uptake of I-131 by embryonic thyroid.
c. Effect of vitamin A on embryonic thyroid.

CARTER, T. C. M.A., Ph.D., D.Sc. — Radiobiol. Res. Unit, Atomic Energy Res. Establ., HARWELL, Berkshire, England
(no embryological work in progress)

CARTIER, R. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, Hopital Broca, 111, Rue L. M. Nordmann, PARIS XIII, France

a. Utilisation des techniques de microscopie électronique dans l'étude de l'ovogénèse. *(Mammalia)* (en collaboration avec R. MORICARD et Mrs. N. HINGLAIS (GUILLAUD))

CASPARI, E. W. Ph.D., Prof. — Shanklin Lab. of Biol., Wesleyan Univ., MIDDLETOWN, Conn., U.S.A.

a. Mitochondria in development and heredity. *Mus musculus (Rodentia)*
b. Development of pigment granules and riboflavin in the testis. *Ephestia Kühniella (Lepidoptera)*

CASTIGLI (PITOTTI), Mrs. M. Dott., Prof. — Ist. di Biol. gen., Fac. di Med., S. Pietro, PERUGIA, Italia

a. Natura della gastrulazione senza segmentazione. *Petromyzon fluviatilis (Cyclostomata)*
b. Azione e reazione nella metamorfosi. *Bufo vulgaris (Anura)*
c. Morfogenesi proteica.

CASTIGLIONI, Miss M.C. Dr. — Ist. di Genet., Univ. di Milano, Via Celoria 10, MILANO, Italia

a. Experimental study of development of pseudotumors. *Drosophila* spec. *(Diptera)*
b. Transplantation of eye discs between stocks with developmental abnormalities of the eye. *Drosophila* spec. *(Diptera)*
c. Paper chromatography of mutants. *Drosophila* spec. *(Diptera)*
d. Tissue culture. *Drosophila* spec. *(Diptera)*

CATE, G. ten M.D., M.I.I.E. — Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O, Holland

a. Study about the origin of the specific lens protein α-crystallin and of other organ-specific proteins in development. *(Amphibia)*, *Gallus* spec. *(Aves)*
b. Study on the development of organ-specific enzymes or enzymepatterns, e.g. histidase in liver. *(Amphibia)*, *Gallus* spec. *(Aves)*
c. Study on the effect of temperature on morphological development. *(Amphibia)*

CATHER, J. N. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich., U.S.A.

a. The differentiation of the shell gland. *Ilyanassa obsoleta* and other *Gastropoda* and *Pelecypoda (Mollusca)*

CATHEY, W. J. Dr. — Dept. of Pathol., Johns Hopkins Hospital, The Johns Hopkins Univ., BALTIMORE 5, Md., U.S.A.

CAUNA, N. M.D., M.Sc. — Dept. of Anat., Med. School, King's Coll., Univ. of Durham, NEWCASTLE upon Tyne, England

a. Development of cutaneous receptor organs and nerves. *Homo sapiens (Primates)*
b. Early development of limbs. *Homo sapiens (Primates)* and other spp. *(Vertebrata)*

CÉAS, Miss M. P. Ph.D. — Stazione Zool., Acquario, NAPOLI, Italia

a. Biochemical activities of the different presumptive territories of the young gastrula. *Discoglossus pictus (Anura)*
b. Distribution of DL Methionine-S^{35} in eggs, *Phallusia mamillata (Ascidiae)*
c. Deoxycytidilic monoph.-deaminase activity in normal and hybrid embryo. *(Echinoidea)*

CHACHULSKA, W. Mgr. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Restoration of the thyroid gland after experimental injury.
b. Transplantation of the ovary. *Mus musculus (Rodentia)*

CHALKLEY, D. T. B.A., M.A., Ph.D. — Univ. of Notre Dame, NOTRE DAME, Ind., U.S.A.

CHANG, C. Y. M.S., Ph.D., M.I.I.E. — 28 Lai Yang Road, TSINGTAO, China (via Hong-Kong)

CHANG, M. C. Ph.D. — Worcester Foundation for Exper. Biol., 222 Maple Ave., SHREWSBURY, Mass., U.S.A.

CHANMUGAM, P. K. M.Sc., M.R.C.S., L.R.C.P., L.M.S., Prof. — Dept. of Anat., Fac. of Med., Univ. of Ceylon, Kynsey Road, COLOMBO 8, Ceylon

CHARNIAUX (COTTON), Mrs. H. Dr.ès-Sci. — Lab. de Génét. évolutive du C.N.R.S., GIF sur Yvette (S. et O.), France
a. Contrôle hormonal de la différenciation sexuelle. La glande androgène. *Orchestia gammarellus (Amphipoda, Crustacea)*
b. Détermination génétique du sexe. *Orchestia gammarellus (Amphipoda, Crustacea)*

CHASE, H. B. Ph.D., Prof. — Arnold Biol. Lab., Brown Univ., PROVIDENCE 12, R.I., U.S.A.
a. A study of anophthalmia and microphthalmia. *Mus musculus (Rodentia)*
b. A study of skin and its derivatives with emphasis on hair development and pigment distribution. *Mus musculus (Rodentia)*
c. Radiation effects on hair follicle morphogenesis. *Mus musculus, Cavia cobaya (Rodentia)*

CHAYTOR, D. E. B. B.Sc. — Dept. of Embryol., Univ. Coll. London, Gower St., LONDON W.C. 1, England
a. Control of growth in some embryonic organs. *Gallus domesticus (Aves)*

CHEN, P. S. Dr.Phil. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz
a. Biochemical studies on hybrids. *(Echinoidea)* (in collaboration with F. BALTZER, Bern)
b. Biochemical studies on the factor "lethal-meander" (lme). *Drosophila melanogaster (Diptera)*
c. Nucleic acids in development. *Triturus alpestris, T. palmatus, T. cristatus (Urodela)*

CHENEY, R. H. B.S., A.M., S.M., Sc.D., Prof. — Dept. of Biol., Brooklyn Coll., Bedford Ave. and Ave. H, BROOKLYN 10, N.Y., 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 irradiation on development of methylated xanthine-treated eggs. *Arbacia punctulata (Echinoidea)*
f. Effect of caffeine on development. *Rana pipiens (Anura)*

CHÈVREMONT, M. Prof. — Lab. d'Histol. et d'Embryol., Fac. de Méd., 20, Rue de Pitteurs, LIÈGE, Belgique
a. Etude cytologique et cytochimique du mécanisme de la mitose et de la préparation à la mitose.
b. Etude du chondriome.
c. Etude des processus de régénération.

CHIQUOINE, A. D. B.A., Ph.D. — Dept. of Anat., Washington Univ., ST. LOUIS, Mo., U.S.A.

CHISHIMA, K. Prof. — Lab. for Biol., Gifu Univ., Nagara, GIFU, Japan
a. New cell (spermatogonia)-formation from living substances (fatty tissue). *Bombyx mori, Pachytilus danicus (Insecta)*
b. New cell (hemocytoblast)-formation from yolk spheres in embryo and tadpole. *Rana nigromaculata (Anura)*
c. New formation of sponge cell from an aggregated mass of zoochlorellas. *Spongilla semispongilla (Porifera)*
d. New formation of blood cell in digestive tract. *(Amphibia, Aves, Mammalia)*

CHOVNICK, A. A.B., M.A., Ph.D. — Long Island Biol. Lab., COLD SPRING HARBOR, N.Y., U.S.A.
a. Developmental effects of pseudoallelic loci. *Drosophila melanogaster (Diptera)*
b. Nutritional requirements associated with morphological mutants and lethals. *Drosophila melanogaster (Diptera)*
c. Parameters in recombination. *Drosophila melanogaster (Diptera)*
d. Gene conversion. *Drosophila melanogaster (Diptera)*

CHOWDHURY, Miss M. B.Sc. (Hons) — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
a. Physiology of cell-contact. *(Porifera)* (in collaboration with S. MOOKERJEE and B. GANGULY)

CHUANG HSIAO HUI Dr.rer.nat., Dr.rer.nat.habil., F.I.I.E. — Lab. of Developm. Physiol., Inst. for Exper. Biol., Acad. Sinica, 320 Yo Yang Road, SHANGHAI, China

CIGADA (LEONARDI), Mrs. M. Dott.Sci.Biol., M.I.I.E. — Ist. di Zool. e Anat. Comp., Univ. di Milano, Via Celoria 10, MILANO, Italia

CITTERIO, P. Grad.stud. — Ist. di Zool. e Anat. Comp., Univ. di Milano, Via Celoria 10, MILANO, Italia

CLARK, H. B.A., Ph.D., Prof. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.
a. Nitrogen metabolism of embryos. *(Reptilia, Aves)*
b. Factors affecting reaggregation of segregated cells in tissue culture.
c. Phase contrast cinematography of differentiating cells. *Gallus domesticus (Aves)*
d. Role of RNA in embryonic differentiation.

CLAVERT, J. M. J. Dr. en Méd., Dr. ès Sci., M.I.I.E., Prof. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
a. Formation de l'oeuf (Rôle de l'hormone fémelle dans la vitellogénèse). *(Pisces), (Reptilia), Columba* spec., *Anas* spec., *Gallus* spec. *(Aves)*
b. Recherches sur le déterminisme de la symétrie bilaterale. *(Pisces, Reptilia, Aves)*

CLAYTON (FREEDMAN), Mrs. R. M. B.A., M.A. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland

a. Studies of differentiation by immunological and other techniques. *Triturus alpestris (Urodela)*
b. Studies of a locus in a highly inbred line by immunological and allied techniques: the loci "pink eye", "luxate", and "agouti" in CBA mice and "albino" in an inbred strain of this laboratory. *Mus musculus (Rodentia)*
c. Differentiation in tissue culture. *Gallus* spec. *(Aves)* (in collaboration with T. S. OKADA)
d. Studies of differentiation by immunological and chromatographic techniques. *Mus musculus (Rodentia)*
e. Immunological study of nucleoproteins. *Gallus* spec. *(Aves)*

CLEGG, E. J. M.B., Ch.B., Ph.D. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL, England

a. Effects of artificial cryptorchidism on the accessory reproductive organs. *(Mammalia)*
b. Effects of low atmospheric pressure on the reproductive and endocrine systems of laboratory animals. *(Mammalia)*

CLEMENT, A. C. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Emory Univ., ATLANTA 22, Ga., U.S.A.

a. Localization of morphogenic factors: experimental analysis. *Ilyanassa obsoleta (Gastropoda)*
b. Distribution of mitochondria and lipid droplets during early development. *Ilyanassa obsoleta (Gastropoda)* (in collaboration with F. E. LEHMANN)
c. Cytochemical and physiological studies of early development. *Ilyanassa obsoleta (Gastropoda)*

CLEMENTS, L. P. Dr., Prof. — Dept. of Anat., School of Med., The Creighton Univ., OMAHA, Nebraska, U.S.A.

COHEN, A. I. Ph.D. — Dept. of Anat., Med. School, Washington Univ., ST LOUIS 10, Mo., U.S.A.

COHN, S. A. B.S., M.S., Ph.D. — Div. of Anat., Med. Units, Fac. of Biol. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

a. The development of glands of ectodermal origin. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Cytological, cytochemical and histochemical studies on the initiation of secretory activity in developing ectodermal glands. *Mus musculus (Rodentia)*
c. Studies of tooth development. *Mus musculus (Rodentia)*

COLEMAN, J. R. A.B., M.A. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.

a. Immunochemical study of DNA and DNA-protein of developing red blood cell. *Gallus gallus (Aves)*

COLLE (VANDEVELDE), Mrs. A. M.D. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium

a. Histochemistry of the developing blood.

COLOMBO, G. Dr. Biol. Sci. — Ist. di Zool. e Anat. comp., Fac. di Sci., Via Loredan 10, PADOVA, Italia

a. Gametogenesis. *(Arthropoda)*
b. Development of the gonads. *(Insecta)*

COLWIN, A. L. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Queens Coll., FLUSHING 67, L.I., N.Y., U.S.A.

a. Fertilization: sperm-egg association and sperm penetration; cortical changes; membrane changes, lytic aspects. Living material and electron microscope studies. *(Enteropneusta, Echinodermata, Annelida)* (in collaboration with Mrs L. H. COLWIN)

COLWIN, Mrs. L. HUNTER Ph.D., Prof. — Dept. of Biol., Queens Coll., FLUSHING 67, L.I., N.Y., U.S.A.

a. Fertilization: sperm-egg association and sperm penetration; cortical changes; membrane changes, lytic aspects. Living material and electron microscope studies. *(Enteropneusta, Echinodermata, Annelida)* (in collaboration with A. L. COLWIN)

CONAWAY, C. H. B.S., Ph.D. — Dept. of Zool., Univ. of Missouri, COLUMBIA, Mo., U.S.A.

CONDORELLI, M. Dott. in Med. — Semeiotica Medica, Università di Roma, Policlinico Umberto I, ROMA, Italia

CONINCK, L. A. P. De Dr.Sc., Prof. — Lab. voor Zool., Afd. Morphol., Universiteitstraat 14, GENT, België

CORLISS, C. E. B.S., M.S., Ph.D. — Div. of Anat., Med. Units, Fac. of Biol. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

a. Study of mitotic activity and its relation to morphogenesis in young embryos. *Mus norvegicus* albinus *(Rodentia)*

b. Colchicine toxicity to embryonic tissue. *Mus norvegicus* albinus *(Rodentia)*

c. Study of mitotic activity in the central nervous system and its relation to morphogenesis and virus susceptibility. *Gallus domesticus (Aves)*

CORNER, G. W. A.B., M.D., D.Sc., F.I.I.E., Prof. — Rockefeller Inst. for Med. Research, 66th St. and York Ave., NEW YORK 21, N.Y., U.S.A.

a. Embryology and physiology of the uterus. *(Mammalia)*

CORNER, Jr., G. W. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.

a. Determinations of blood, amniotic and intervillous space pressures throughout pregnancy. *Macaca mulatta (Primates)* (in collaboration with Miss E. M. RAMSEY and W. N. LONG)

COSTELLO, D. P. Ph.D., F.I.I.E., Prof. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.

a. Studies in experimental cytology. *Polychoerus* spec. *(Acoela, Turbellaria), Nereis limbata, Chaetopterus* spec. *(Polychaeta), Ambystoma maculatum (Urodela)* (in collaboration with Miss C. HENLEY)

b. Effects of antimitotic agents on larval tail-tips. *Ambystoma maculatum (Urodela)* (in collaboration with Miss C. HENLEY)

COSTLOW, J. D. A.B., Ph.D. — Duke Univ. Marine Lab., BEAUFORT, N.C., U.S.A.

COTRONEI, G. Dott., F.I.I.E., Prof. — Ist. di Anat. comp. dell'Univ., Fac. di Sci., Via Borelli 50, ROMA, Italia

COULOMBRE, A. J. B.S., M.S., Ph.D. — Dept. of Anat., Yale Univ. School of Med., 333 Cedar St., NEW HAVEN 11, Conn., U.S.A.

a. Developmental physiology of corneal transparency. *Gallus domesticus (Aves)* (in collaboration with J. L. COULOMBRE)

b. Electron microscopic study of the developing intestinal mucosa. *Gallus domesticus (Aves)* (in collaboration with J. L. COULOMBRE)

c. Developmental histochemistry of the cornea. *Gallus domesticus (Aves)* (in collaboration with J. L. COULOMBRE)
d. Mitotic patterns in the developing intestine. *Gallus domesticus (Aves)* (in collaboration with J. L. COULOMBRE)
e. Experimental modification of intestinal histogenesis. *Gallus domesticus (Aves)* (in collaboration with J. L. COULOMBRE)

COULOMBRE, J. L. — Dept. of Anat., Yale Univ. School of Med., 333 Cedar St., NEW HAVEN 11, Conn., U.S.A.
a. Developmental physiology of corneal transparency. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)
b. Electron microscopic study of the developing intestinal mucosa. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)
c. Developmental histochemistry of the cornea. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)
d. Mitotic patterns in the developing intestine. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)
e. Experimental modification of intestinal histogenesis. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)

COUNCE, Miss S. J. M.A., Ph.D. — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.
a. Egg development in the ovaries of female steriles. *Drosophila* spec. *(Diptera)*
b. Developmental effects of female-sterility genes. *Drosophila* spec. *(Diptera)*
c. Developmental effects of heritable cytoplasmic factors ("sex-ratio"). *Drosophila* spec. *(Diptera)*

COURRIER, R. Prof. — Lab. de Morphol. expér. et Endocrinol., Coll. de France, Place Marcelin Berthelot 11, PARIS Ve, France

CRAFTS, R. C. — Dept. of Anat., Coll. of Med., Univ. of Cincinnati, Eden Ave., CINCINNATI 19, Ohio, U.S.A.
(no embryological work in progress)

CRELIN, E. S. Ph.D. — Dept. of Anat., Yale Univ. School of Med., 333 Cedar St., NEW HAVEN 11, Conn., U.S.A.
a. Development of bone and joints. *Mus musculus (Rodentia)*

CRISP, D. J. M.A., Ph.D. — Marine Biol. Station, Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales
a. Rate of development of egg masses in vitro. *Balanus* spec., *Chthamalus stellatus (Cirripedia)*
b. Induction of breeding by temperature conditioning. *(*Mainly *Cirripedia)*

CROISILLE, Y. Lic. ès Sci., Dr. de l'Univ. de Paris — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Culture de foie embryonnaire sur des milieux à base de divers extraits d'organes. *Gallus gallus (Aves)*
b. Culture d'organes embryonnaires sur des extraits homo- et hétérologues. *Gallus gallus (Aves)*
c. Application de méthodes immunochimiques à l'étude de l'apparition des constituants spécifiques au cours du développement. *Gallus gallus (Aves)*

CROWDER, R. E. M.D. — U.S. Naval Hospital, CAMP LEJEUNE, N.C., U.S.A.

CROWELL, P. S. A.B., A.M., Ph.D. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.

a. Morphogenesis and growth. *Campanularia flexuosa (Hydroidea)*
b. Regeneration. *Eisenia foetida (Oligochaeta)*

CURTIS, A. S. G. B.A., Ph.D. — Dept. of Embryol., Univ. Coll. London, LONDON W.C. 1, England

a. Surface properties, movement and adhesion of embryonic cells and cancerous tissues. *(Amphibia, Aves, Mammalia)*
b. Dissociation and reaggregation of embryos. *(Amphibia, Aves)*

CURY, G. Agr.Phil., Lic.ès Sci. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

a. Régulation de l'oeuf. *(Amphibia)*
b. Développement de l'hypophyse. *(Aves)* (en collaboration avec G. GRIGNON)
c. Hématopoïèse. *(Aves)* (en collaboration avec A. DOLLANDER et Mrs. D. GASSIOLE)

CZAPSKA, D. Mgr. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland

(no embryological work in progress)

DAGG, C. P. B.S., Ph.D. — Roscoe B. Jackson Memorial Lab., BAR HARBOR, Me., U.S.A.

a. Environmental influences on embryonic development. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Developmental genetics. *Mus muscules (Rodentia)*

DAHL, E. Prof. — Embryol. Dept., Zool. Inst. of the Univ. of Lund, LUND, Sweden

a. Comparative embryology. *(Crustacea)*

DALCQ, A. M. M.D., F.I.I.E., Prof. — Lab. d'Anat. et d'Embryol., Fac. de Méd., 97 Rue aux Laines, BRUXELLES, Belgique

a. Cytochemistry of early stages of development. *(Ascidiae; Mammalia)*
b. Adenosinetriphosphatase in eggs. *(Mammalia)*

DALTON, H. C. Ph.D. — Dept. of Biol., Washington Square Coll., New York Univ., NEW YORK 3, N.Y., U.S.A.

DAMAS, H. F. C. Dr.Sc., Agr.Zool., M.I.I.E., Prof. — Dépt. Morphol., Inst. de Zool. Ed. Van Beneden, Fac. des Sci., 22 Quai Ed. Van Beneden, LIÈGE, Belgique

a. Etude descriptive et comparative du développement. *Petromyzon marinus, Lampetra fluviatilis, L. planeri (Cyclostomata)*

D'AMELIO, V. Ph.D. — Ist. di Anat. Comp., Via Archirafi 22, PALERMO, Italia

a. Formation of hemoglobin. *Gallus* spec. *(Aves)*

DAMERON, Miss F. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tétatol. expér du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. L'influence de la température sur la croissance et la différenciation d'organes embryonnaires cultivés in vitro. *Gallus gallus (Aves)*

DAN, Mrs. J. C. Ph.D., M.I.I.E. — Embryol. Section, Dept. of Biol., Fac. of Sci., Ochanomizu Univ., Bunkyo-ku, TOKYO, Japan

a. Electron-microscope observation of spermatozoa under various experimental conditions. *(Echinodermata, Mollusca, Annelida)*
b. Study of egg-membrane lysin of spermatozoa. *(Mollusca)*

DAN, K. Ph.D., M.I.I.E., Prof. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
a. Mitotic spindle isolation and analysis. *(Echinoidea)*
b. Mechanism of polar body formation. *(Mollusca)*
c. Protein SH in the ova. *(Echinoidea)*

D'ANCONA, U. Dr. Nat. Sci., M.I.I.E., Prof. — Ist. di Zool. e Anat. comp., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. Differentiation of the gonad. *(Vertebrata,* esp. *Pisces)*

DANKMEIJER, J. Med.Dr., Prof. — Anat.-Embryol. Lab. of the Univ. of Leyden, Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Normal and abnormal development of the heart. *Homo sapiens* and other *Animalia* (in collaboration with J. A. LOS)
b. Development of thyroid gland and teeth (investigations with radio-active isotopes). (in collaboration with P. J. BROUWER)
c. Development of uterus. *Homo sapiens (Primates)*
d. Heart and vessels in congenital malformations. *Homo sapiens (Primates)* (in collaboration with H. A. SNELLEN, Miss A. DEKKER and Miss H. C. van INGEN)
e. Development of the stomach. *Homo sapiens (Primates)* (in collaboration with M. MIETE)

D'ANNA, T. Ph.D. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Radioautographic investigations in embryonic development. *(Ascidiae, Urochordata)*

DARLINGTON, D. M.B., Ch.B. — Dept. of Anat., The Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a. Experimental investigation of post-natal development of masticatory apparatus. *(Rodentia)*

DASGUPTA, B. M.Sc., Ph.D. — Biol. Lab., Darjeeling Government Coll., DARJEELING, West Bengal, India
a. Cytochemical investigations on development. *Plasmodium gallinaceum, P. cynomolgi, Eimeria stiedae, Hepatozoon* spec. *(Sporozoa)*

DAVIES, D. H. M.Sc., Ph.D., Prof. — Marine Biol. Research Inst., P.O. Box 736, DURBAN, S. Africa
(no embryological work in progress)

DAVIES, F. M.D., D.Sc., Prof. — Dept. of Anat., Fac. of Med., Univ. of Sheffield, SHEFFIELD, England
a. Histological studies of conducting system of the heart. *(Mammalia)* (in collaboration with E. T. B. FRANCIS, Dept. of Zool.)

DAVIS, Miss R. J. B.Sc. (Hon.) — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, South Africa
a. An electron miscrocopic investigation of early development. *(Teleostei)*

DE BEER, Sir G. R. F.I.I.E., Prof. — British Museum (Natural History), Cromwell Road, LONDON S.W. 7, England

DECHAMBE, Miss C. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351, Cours de la Libération, TALENCE (Gironde), France
a. Modalités et facteurs de formation de l'ostium. *(Anura)*
b. Etude expérimentale de la métamorphose de l'appareil excréteur. *(Anura)*

DECK, J. D. B.S., M.A., Ph.D. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.

a. Study of innervation of larval forelimbs which have regenerated after transplantation with reversed proximo-distal polarity. *Ambystoma punctatum (Urodela)*
b. Study of relationship between innervation and regeneration of larval limbs with reversed proximo-distal polarity. *Ambystoma punctatum (Urodela)*
c. Study of adult limb regeneration which occurred after implantation of tadpole tissues into the limb. *Rana pipiens (Anura)*

DE FEO, V. J. B.S., M.S., Ph. D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.

a. Embryo-maternal relationships. 1. Nature of uterine sensitivity. 2. Mechanism of deciduoma formation. *Rattus rattus (Rodentia)*

DEGENHARDT, K.-H. Dr.med. — Inst. für Humangenetik der Univ. Münster, Waldeyerstr. 27, MÜNSTER (Westf.), Deutschland

a. Descriptive embryology. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora)*
b. Experimental embryology. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora)*
c. Developmental genetics. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora)*
d. Developmental pathology. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora)*

DeHAAN, R. L. M.A., Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.

a. Morphogenetic movements associated with embryonic heart formation. *Gallus gallus (Aves)*
b. Membrane-linked phenomena and mechanisms of cell adhesion during morphogenesis. *Gallus gallus (Aves), Dictyostelium discoideum (Acrasiales)*

DEKKER, Miss A. Med.Dr. — Anat.-Embryol. Lab. of the Univ., Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland

a. Heart and vessels in congenital malformations. *Homo sapiens (Primates)* (in collaboration with J. DANKMEIJER, H. A. SNELLEN and Miss H. C. van INGEN)

DELMAS, A. Prof. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Développement de l'encéphale. *Homo sapiens (Primates)*
b. Développement anormal de l'encéphale et des organes des sens. *Mus rattus (Rodentia)*

DENIS, H. A. Lic. Sci. Zool. — Dépt. Morphol., Inst. de Zool. Ed. Van Beneden, Fac. des Sci., 22 Quai Ed. Van Beneden, LIÈGE, Belgique

a. Etude du caractère progressif de la détermination de la plaque neurale. *Pleurodeles Waltlii (Urodela)*
b. Recherche sur la genèse des organes cérébraux, par la méthode des greffes. *Pleurodeles Waltlii, Ambystoma mexicanum (Urodela)*

DENT, J. N. A.B., Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.

a. Further studies on regeneration. *Triturus viridescens (Urodela)*

b. Metamorphosis of a presumably neotenic cave form. *Gyrinophilus palleucus (Urodela)*

DENUCÉ, J. M. Dr.Zool.Sci. — Lab. voor Zool., Afd. Morphol., Universiteitstraat 14, GENT, België

DEROUX, G. Lic.ès Sci. — Station Biologique, ROSCOFF, Finistère, France

DETH, J. H. M. G. van M.D., Prof. — Anat.-Embryol. Lab., State Univ., Janskerkhof 3, UTRECHT, Holland

a. Fetal endocrinology. *(Aves, Mammalia)*

DETTLAFF, Mrs. T. A. Dr. Biol. Sci., M.I.I.E., Prof. — Inst. of Anim. Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.

a. Physiology of activation of the egg; the role of Ca-ions, the process of secretion. *Huso huso, Acipenser güldenstädti, A. stellatus (Acipenseriformes, Chondrostei)*

b. The fate of the polysaccharides in the period of fertilization. *(Acipenseriformes, Chondrostei)*

DEUCHAR, Miss E. M. M.A., Ph.D., M.I.I.E. — Dept. of Embryol., Univ. Coll. London, Gower St., LONDON W.C. 1, England

a. ATP-ase activity in segmenting somite tissue, related to myosin synthesis and mitochondrial development. *Gallus domesticus (Aves)*

b. Effect of co-bromo-allylglycine on protein metabolism in segmenting somites. *Gallus domesticus (Aves)*

c. Amino-acid activation systems in embryonic tissues. *Xenopus laevis (Anura)*

DEV, D. — Cell Research Unit, Dept. of Zool., Calcutta Univ., 35 Ballygunje Circular Road, CALCUTTA 19, India

a. Effect of neurohormones on development and metamorphosis. *Bombyx mori, Chrysocoris stolli, Macroceroea grandis* and other spp. *(Insecta)* (in collaboration with D. N. GANGULY, D. N. SARKAR, P. BANARJEE, M. BANARJEE and B. BOSE)

DEVILLERS, Ch. M.I.I.E., Prof. — Lab. d'Anat. et d'Histol. comp., 1 Rue Victor Cousin, PARIS Ve, France

a. Origine de l'énergie utilisée au cours du développement de l'oeuf. *Salmo fario, S. irideus (Teleostei)*

b. Recherches sur la symétrisation de l'oeuf. *Salmo* spec. *(Teleostei)*

DICK, D. A. T. M.B., Ch.B., D.Phil. — Dept. of Human Anat., The Univ. Museum, South Parks Road, OXFORD, England

DICKSON, A. D. M.A., M.D. — Dept. of Anat., Marischal Coll., ABERDEEN, Scotland

a. Placental hormones, cytochemistry of placenta, implantation, metabolism of cleaving ova. *(Rodentia)* (in collaboration with D. BULMER)

DIETERLEN (LIÈVRE), Mrs. F. Lic. ès Sci., M.A. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tétarol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Embryonic differentiation of the endocrine cells of the pancreas, and the influence of hypophysectomy on differentiation. *Gallus gallus (Aves)*

b. In vitro development of the pancreas. Its influence on liver glycogen in associated cultures. *Gallus galus (Aves)*

DIMITROVA, Miss A. D.Sc., Prof. — Inst. of Gener. Biol., Higher Med. School, Blwd. Lenin N. 2, SOFIA 13, Bulgaria
a. Larval limb regeneration as influenced by the medium. *(Anura)*
b. Muscle regeneration. *Rattus* spec. *(Rodentia)*

DIMOND, Sister M. T. A.B., M.S., Ph.D. — Trinity Coll., WASHINGTON 17, D.C., U.S.A.
a. Histogenesis and interrelations of endocrines: the hypophysis under normal conditions and after treatment with thiourea. *Chelydra serpentina serpentina,* and other spp. *(Chelonia)*

DINGLER (HAHL), Mrs. E. Ch. Dr.med. — Anat. Inst. der Univ. München, Pettenkoferstr. 11, MÜNCHEN 15, Deutschland
a. Metrische Bestimmungen über das Ausmass des postnatalen Lungenwachstums. *Felis domestica (Carnivora)*

DOHRN, P. M.D., Ph.D. — Stazione Zool., NAPOLI, Italia

DOKTER, H. J. M.D. — Anat.-Embryol. Lab., Free Calvinistic Univ., Pr. Hendriklaan 27, AMSTERDAM Z., Holland

DOLLANDER, A. Prof. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France
a. Etude de propriétés mécaniques du cortex de l'oeuf. *(Amphibia)*
b. Etude des propriétés du perméabilité du cortex de l'oeuf. *(Amphibia)*
c. Etude morphologique du cortex de l'oeuf au microscope optique et au microscope électronique *(Amphibia; Mammalia)*
d. Structure du spermatozoide au microscope optique et au microscope électronique *(Amphibia)*
e. Hématopoïèse. *(Aves)* (en collaboration avec G. CURY et Mrs. D. GASSIOLE)

DONALDSON, J. C. Ph.B., M.D., Prof. Emer. — Dept. of Anat., School of Med., Univ. of Pittsburgh, 820 Health Professions Bldg., PITTSBURGH 13, Pa., U.S.A.
a. Pancreatic developmental studies. *Homo sapiens (Primates)*

DOORENMAALEN, W. J. van M.D. — Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O, Holland — temporary: Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. The localisation of lensproteins in lens development. *Gallus gallus (Aves)*
b. Source of lensproteins in lens regeneration. *Gallus gallus (Aves)*
c. Antibody synthesis during development. *Gallus gallus (Aves)*

DOSKOČIL, M. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA II, Czechoslovakia
a. The influence of lesion of the central nervous system upon embryonic body growth. *Gallus domesticus (Aves)*

DOSSEL, W. E. A.B., M.S., Ph.D. — Dept. of Anat., School of Med., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.
a. Regulation of size and functional activity of heterotopic, homoioplastic transplants of the thyroid. *Gallus domesticus (Aves)*
b Study of the origin of the thyroid using immunological methods. *Gallus domesticus* (various varieties) *(Aves)*
c. Fine structure of certain Anlagen. *Gallus domesticus* (various varieties) *(Aves)*

DRAGOMIROV, N. I. Dr. Biol., F.I.I.E., Prof. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.

a. The development of the lateral sensory system. *Huso huso (Chondrostei)*

DREYER, Miss M. V. M.Sc. — Dept. of Zool., Univ. of O.F.S., BLOEMFONTEIN, South Africa

a. A histological investigation on the epithelio-neural bodies. *Gallus domesticus (Aves)*

DUFAURE, J. P. Lic. ès Sci. — Lab. de Zool., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France

a. Développement embryonnaire. *Lacerta vivipara (Lacertilia)*

DURANTE, Miss M. Dr. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Cholinesterase, dipeptidase and other enzymes in embryonic development. *(Ascidiaceae)*

DUTTA, J. B.Sc. (Hons) — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Nucleo-cytoplasmic relationship. *Amoeba* spec. *(Protozoa)* (in collaboration with S. MOOKERJEE, L. WAIDYASEKARA, Mrs. M. G. ALAMELU and Miss D. MUKERJI)

DUYVENÉ DE WIT, J. J. Dr. Phil. Nat., Prof. — Dept. of Zool., Univ. of O.F.S., BLOEMFONTEIN, South Africa

(no embryological work in progress)

DZIALLAS, P. R. Dr.med. — Anat. Inst. der Univ. München, Pettenkoferstr. 11, MÜNCHEN 15, Deutschland

a. Die prävertebralen Stämme der Blutgefässe eines Embryos von 27 mm. Länge. *Homo sapiens (Primates)*

b. Untersuchungen über die Lage der fetalen Trachea, den Stand und die Grösse des Bifurkationswinkels. *Homo sapiens (Primates)*

EAKIN, R. M. A.B., Ph.D., F.I.I.E., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Cal., U.S.A.

a. Determination of neural plate, lens, and hypophysis. *Hyla regilla (Anura)*

b. Electron microscopy of induction systems. *Hyla regilla (Anura)*

c. Development of parietal eye. *Sceloporus occidentalis (Lacertilia)*

EAYRS, J. T. B.Sc., Ph.D., D.Sc. — Dept. of Anat., The Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England

a. Effects of hormones on central nervous development. *(Rodentia)*

EBERT, J. D. Ph.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.

a. Biochemical and immunochemical analysis of the synthesis and distribution of the contractile proteins, actin, myosin (esp. H-meromyosin) and tropomyosin in the development of the heart in the early embryo. *Gallus gallus (Aves)* (in collaboration with R. F. RUTH)

b. The metabolic characteristics of the heart-forming areas of the early embryo. *Gallus gallus (Aves)* (in collaboration with J. McKENZIE)

c. Immunological studies of melanogenesis; immunochemical properties of the melanins; melanoproteins. The chemistry of the pigment-forming area in the early embryo. *Gallus gallus (Aves)*

d. Analysis of the effects of adult or late embryonic tissue transplants (chorioallantoic, intra-coelomic) on the differentiation and growth of the homologous tissues of the host embryo. *Gallus gallus (Aves)*

1. Selective transfer of radioactivity from grafts to homologous host tissues.
2. Fractionating and identification of organ-specific growth regulatory substances (inhibitory, stimulatory).
3. Growth regulation in normal and decapitated embryos.

e. The graft-versus-host reaction and development of immune mechanisms in the embryo. *Gallus gallus (Aves)*
f. Animal viruses (esp. tumor viruses) as tools in studying embryonic induction. *Gallus gallus (Aves)*

ECHEVERRIA, M. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

EDDS, M. V., Jr. B.A., M.A., Ph.D. — Arnold Biol. Lab., Brown Univ., PROVIDENCE 12, R.I., U.S.A.

a. Development of collagenous lamellae. *Rana pipiens (Anura)*

EDE, D. A. B.Sc., M.S., Ph.D. — Wye Coll., Near Ashford, Kent, England

a. Developmental genetic studies. *Dermestes maculatus (Coleoptera)*
b. Effects of lethal genes on embryonic development. *Gallus domesticus (Aves)* (in collaboration with W. A. KELLY)
c. Effects of tumour-inducing viruses on embryonic and early development. *Gallus domesticus (Aves)* (in collaboration with W. A. KELLY)

EDWARDS, R. G. B.Sc., Ph.D. — Nat. Inst. for Med. Research, Mill Hill, LONDON N.W. 7, England

a. The effects of antisera on fertilization and development. *(Mammalia)*
b. The development of heteroploid and hybrid embryos. *(Mammalia)*

EGELHAAF, A. Dr. rer. nat. — Max Planck-Inst. für Biol., Spemannstr. 34, TÜBINGEN, Deutschland

a. Chemische Genwirkungen auf Augen- und Flügelpigmente. *Ephestia* spec., *Plodia* spec., *Ptychopoda* spec. *(Lepidoptera)*
b. Stoffinventar und Enzymwirkung in verschiedenen Entwicklungsstadien. *Ephestia* spec. *(Lepidoptera)*

EGUCHI, G. B.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan *(Urodela)*

a. The lens regeneration in the cyclopean monster. *Triturus pyrrhogaster*
b. Electron microscope studies on lens regeneration. *Triturus pyrrhogaster (Urodela)*

ELBERS, P. F. Ph.D. — Centrum voor Electronenmicroscopie, Janskerkhof 3, UTRECHT, Holland

a. Electron microscopical investigation on growth and differentiation of the egg. *Limnaea stagnalis (Gastropoda)*
b. Electron microscopical investigation on the influence of Li ions on the egg. *Limnaea stagnalis (Gastropoda)*

EMANUELSSON, H. Fil.lic. — Zoophysiol. Inst., Univ. of Lund, LUND, Sweden

a. DNA-synthesis in the early embryo. *Gallus domesticus (Aves)*
b. Growth regulation in the early embryo. *Gallus domesticus (Aves)*
   1. Effects of temperature shocks.
   2. Effects of added organ-specific RNA.
   3. Effects of mitosis-inhibitors.

ENDO, Y. M.Sc. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan

a. Electron microscopical study of fertilization. *(Echinoidea)*
b. A study of the fertilization membrane. *(Echinoidea)*

ENEMAR, E. A. W. Fil. lic. — Embryol. Dept., Zool. Inst. of the Univ. of Lund, LUND, Sweden
a. The development of the hypophysial vascular system. *(Amniota)*

ENGELBRECHT, D. van Z. D.Sc. — Zool. Inst., Univ. of Stellenbosch, STELLENBOSCH, South Africa
a. Anterior regeneration. *(Lumbricidae, Oligochaeta)*

ENGELMANN, F. Dr.Phil. — Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

ENGLÄNDER, H. Dr. Med., Dr. rer. nat. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland
a. Regionalspezifische Induktion. *(Urodela)*

ERENÇIN, Z. Med. Veter. Dr., Prof. — Inst. of Histol. and Embryol., Veter Coll. of the Univ., ANKARA, Turkey
(no embryological work in progress)

ERHART, E. A. M.D. — Section of Neuroanat., Dept. of Anat., Fac. of Med. of the Univ. of São Paulo, Caixa Postal 100-B, SÃO PAULO, Brazil
a. Regeneration after transection of the embryonic spinal cord. *Gallus* spec. *(Aves)*

EVANS, H. J. Ph.D. — Dept. of Zool., Syracuse Univ., SYRACUSE 10, N.Y., U.S.A.

EYAL (GILADI), Mrs. H. M.Sc., Ph.D. — Dept. of Zool., Hebrew Univ., JERUSALEM, Israel
a. Problems concerning the induction of the oral hypophysis. *Pleurodeles waltlii (Urodela)*
b. A further analysis of the tail darkening effect. *(Urodela)*

EYRIES, Ch. Dr. en Méd. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts-Pères, PARIS VIe, France
a. Oreille interne et complexe acoustico-facial. *Homo sapiens (Primates)*

FAASSEN, F. van Dr. — Anat.-Embryol. Lab., Free Calvinistic Univ., Pr. Hendriklaan 27, AMSTERDAM Z., Holland

FABER, J. Ph.D. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland
a. The self-differentiation of the blastema and the influence of the stump in limb regeneration. Transplantation of blastemata to sites devoid of limb potencies. *Ambystoma mexicanum (Urodela)*
b. The mode of growth of the limb regeneration blastema as studied by carbon marking. *Ambystoma mexicanum (Urodela)*
c. The self-differentiation of parts of the limb regeneration blastema. The influence of the wound surface. *Ambystoma mexicanum (Urodela)*
d. The differentiation of transplanted blastemal mesenchyme covered by wound epidermis of varying ages. *Ambystoma mexicanum (Urodela)*
e. The differentiation of the limb regeneration blastema transplanted with reversed proximo-distal polarity. *Ambystoma mexicanum (Urodela)*

FAGONE, Miss A. Ph.D. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Xenoplastic transplantations of the mouth anlage. *(Anura* and *Urodela)*

FANKHAUSER, G. Ph.D., F.I.I.E., Prof. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J., U.S.A.
a. Development of diploid and heteroploid embryos implanted under the skin of adults. *Triturus* spec. *(Urodela)*

b. Constancy of somatic chromosome numbers. *(Urodela)*
c. Biochemical comparison of diploid and polyploid larvae. *(Urodela)*
d. Biochemistry of metamorphosis. *Triturus viridescens (Urodela)*

FARINELLA (FERRUZZA), Mrs. N. Dr. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Xenoplastic tailbud transplantations. *(Amphibia)*
b. Combinations and transplantation of blastomeres. *(Ascidiaceae)*

FAURÉ-FREMIET, E. Dr., F.I.I.E., Prof.hon. — Lab. d'Embryol. expér., Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

FAUTREZ, J. C. M.D., Member of the Royal Flemish Acad. of Sci., M.I.I.E., Prof. — Lab. of Anat., Fac. of Med., Univ. of Gent, Byloke-kaai 1, GENT, Belgium
a. DNA content of the nucleus during oogenesis. *(Invertebrata)*

FAUTREZ (FIRLEFYN), Mrs. N. J. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium
a. Histochemistry and submicroscopical structure of the egg. *Artemia salina (Phyllopoda, Crustacea)*

FEDOROFF, S. M.A., Ph.D. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Canada
a. Chemical changes in embryonic and adult tissues due to chilling.
b. Serum toxicity tested on cell cultures.

FELDMAN, M. M.Sc., Ph.D. — Dept. of Exper. Biol., Weizman Inst. of Sci., REHOVOTH, Israel

FELL, Miss H. B. Dr., F.I.I.E. — Strangeways Research Lab., Wort's Causeway, CAMBRIDGE, England

FELTS, W. J. L. A.B., A.M., Ph.D. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS 14, Minn. U.S.A.
a. Skeletal growth and development.
b. Effects of mechanical factors on bone and cartilage growth.
c. Infectious disease and skeletal tissue growth. *(Rodentia)*
d. Density and inorganic/organic ratio in developing skeleton. *(Rodentia)*
e. Skeletogenesis in marine forms. *(Mammalia)*

FESSENDEN (COOLEY), Mrs. L. M. B.S., M.S. — Dept. of Embryol., Div. of Biol., Calif. Inst. of Technol., PASADENA 4, Cal., U.S.A.
a. Tissue culture of fertilized eggs and early cleavage stages. *Mus musculus (Rodentia)*
b. Fertilization by intraperitoneal injection of sperm suspension. *Mus musculus (Rodentia)*

FICQ, Mrs. A. A. Dr. en Sci. Biol. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
a. Etude autoradiographique du métabolisme au cours de l'oogénèse. *Asterias* spec. *(Asteroidea, Echinodermata)*, *Rana* spec. *(Anura)*
b. Observations autoradiographiques sur l'oogénèse et la morphogénèse. *Pleurodeles* spec., *Triturus* spec. *(Urodela)*, *Rana fusca (Anura)*
c. Metabolism of purines and pyrimidines during oogenesis and development. *(Amphibia)*

FILOGAMO, G. Dr., Prof. — Ist. di Anat. umana, Fac. di Med., Corso Massimo d'Azeglio 52, TORINO, Italia
a. Attività acetilconilesterasica e prado di differenziazione dei neuroni. *Gallus domesticus (Aves)*

b. Correlazioni interneuronichi ed attività acetilcolesterasica, nella sviluppo dei centri e delle vie ottiche. *Gallus domesticus (Aves)*
c. Correlazioni interneuronichi e mitosi, nello sviluppo dei centri ottici. *Gallus domesticus (Aves)*

FINAMORE, F. J. B.A., M.S., Ph.D. — Physiol. Dept., Nucleic Acid Metabolism Labs., Southern Illinois Univ., CARBONDALE, Ill., U.S.A.
a. Structure of ovarian egg ribonucleic acid. *Rana pipiens, R. catesbeiana (Anura)*
b. Biochemistry of nucleoli. *Rana pipiens, R. catesbeiana (Anura)*
c. Studies on cytoplasmic deoxyribonucleic acid. *Rana pipiens, R. catesbeiana (Anura)*

FINGER, I. B.A., Ph.D. — Dept. of Biol., Haverford Coll., HAVERFORD, Pa., U.S.A.

FINNEGAN, C. V. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada
a. Endoderm induction in hypomere differentiation. *Ambystoma* spec., *Taricha* spec. *(Urodela)*

FISCHBERG, M. Dr. Phil. (Zürich), M.A. (Oxford), M.I.I.E. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England
a. Nuclear transplantation. *Xenopus laevis (Anura)*
b. Analysis of a recessive lethal factor which reduces the number of nucleoli. *Xenopus laevis (Anura)*

FISCHIAROLO, G. Dr. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. The determination of the entoderm. *(Amphibia)*
b. Mitochondria and respiratory enzymes in development. *(Ascidiaceae)*

FISK, A. M.Sc. — Dept. of Biol., St. Mary's Hosp. Med. School, Norfolk Place, Paddington, LONDON W. 2, England

FITZGERALD, L. R. Ph.D. — Div. of Anat., Med. Units, Fac. of Biol. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.
a. Effects of temperature on neonates and development of thermoregulatory mechanisms. *Mus musculus (Rodentia)*
b. Metabolic characteristics of the neonatal period. *Mus musculus (Rodentia)*
c. Oxygen consumption of embryos. *Mus musculus (Rodentia)*

FLEISCHHAUER, K. Dr. Med. — Anat. Inst. der Univ. Kiel, Neue Univ., Haus 30, KIEL, Deutschland
a. Postnatal development of the Ammons Formation. *(Mammalia)*

FLEXNER, L. B. B.S., M.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

FLYNN, T. THOMSON D.Sc., M.B.E., F.I.I.E., Prof. — Zool. Dept., Univ. Coll., Gower St., LONDON W.C. 1, England
a. Development of the neural crest. *(Mammalia)*
b. Placentation. *(Marsupialia)*
c. Development. *Pedetes* spec. *(Rodentia)*

FOLLENIUS, E. Dr.ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Origine de la lignée germinale, morphogénèse et différenciation des gonades. *Xiphophorus Helleri, Lebistes reticulatus, Barbus* spec. *(Teleostei)* (en collaboration avec J. H. VIVIEN)

b. Etude cytologique des différenciations hypophysaires au cours de la morphogénèse et de la différenciation génitale. *Lebistes reticulatus, Xiphophorus Helleri, Gasterosteus aculeatus (Teleostei)*

FONSECA SACARRÃO, G. da Dr.Sc., Prof. — Museu e Lab. Zool. d. Fac. d. Ci., Univ. d. Lisboa, LISBOA, Portugal

a. Development of the "resisting apparatus" of the mantle-funnel, and of the epistellar body. *(Cephalopoda)*

b. Development of the statocyst. *(Cephalopoda)*

FOOTE, Ch. L. B.S., M.S., Ph.D., M.I.I.E. — Zool. Dept., Southern Illinois Univ., CARBONDALE, Ill., U.S.A.

a. Studies on sex differentiation. *Rana clamitans, R. catesbeiana, Xenopus leavis (Anura)* (in collaboration with Mrs. F. M. FOOTE)

b. In vitro cultivation of gonads. *Rana clamitans. R. catesbeiana, Xenopus laevis (Anura)* (in collaboration with Mrs. F. M. FOOTE)

FOOTE, Mrs. F. M. A.B., A.M., Ph.D. — Zool. Dept., Southern Illinois Univ., CARBONDALE, Ill., U.S.A.

a. Studies on sex differentiation. *Rana clamitans, R. catesbeiana, Xenopus laevis (Anura)* (in collaboration with Ch. L. FOOTE)

b. In vitro cultivation of gonads. *Rana clamitans, R. catesbeiana, Xenopus laevis (Anura)* (in collaboration with Ch. L. FOOTE)

FORD, E. H. R. M.A., M.D. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

a. Growth of the foetal skull. *Homo sapiens (Primates)*

b. Influence of thyroid on skull growth (post-natal). *Rattus rattus (Rodentia)*

FORD, P. B.Sc., Ph.D., Prof. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a. Studies on the development and function of the corpuscles of Stannius. *(Salmonidae, Teleostei)*

FORSBERG, J. G. Med.kand. — Dept. of Anat., Univ. of Lund, Biskopsgatan 7, LUND, Sweden

a. Comparative investigations on the development of the vagina. *(Mammalia)* *(Rodentia)*

b. Hormonal influence on development of genital organs. *Rattus* spec.

FORTAK, W. — Inst. of Histol. and Embryol., Acad. of Med., Narutowicza 60, ŁODŹ, Poland

a. Liver regeneration. *Rattus* spec. *(Rodentia)*

FOWLER, I. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Univ. of North-Carolina, CHAPEL HILL, N.C., U.S.A.

FOX, H. B.Sc., Ph.D. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C. 1, England

a. Quantitative analysis of development of pronephric components in larval forms. *Ceratodus* spec. *(Dipnoi), Rana esculenta (Anura),* various spp. *(Urodela)*

b. Factors influencing pronephric growth. *(Urodela)*

FRANCIS, E. T. B. B.Sc., Ph.D., Dr. — Dept. of Zool., Univ. of Sheffield, SHEFFIELD, England

a. The development and histogenesis of the conducting system of the heart. *(Mammalia)* (in collaboration with F. DAVIES, Dept. of Anat.)

FRANÇOIS, Y. Dr.ès Sci. — Lab. d'Anat. comp., Fac. des Sci., 1 Rue Victor Cousin, PARIS Ve, France

a. Anatomy and morphogenesis of the fins and vertebrae. *Salmo* and other spp. *(Teleostei)*
b. Action du D.N.P. sur l'oeuf. *Salmo* spec. *(Teleostei)*

FRANKENBERGER, Z. MUDr., Prof. — Embryolog. ústav lékařské fak. Univ. Karlovy, Albertov 4, PRAHA II, Czechoslovakia
a Development of the skeleton, digestive tract and skin glands. *(Cervidae, Artiodactyla)*

FRANZÉN, Å. S. Fil. Dr. — Zool. Inst., Uppsala Univ., UPPSALA, Sweden
a. Comparative study of the spermatozoon and spermatogenesis. *(Evertebrata)*

FRASER, A. S. Ph.D. — C.S.I.R.O. Anim. Genet. Section, c/o Dept. of Zool., Univ. of Sydney, SYDNEY, N.S.W., Australia

FRASER, F. C. Ph.D., M.D. — Dept. of Genetics, McGill Univ., MONTREAL, Quebec, Canada
a. The experimental production of congenital defects, chiefly by maternal treatment with cortisone and 6-aminonicotinamide. *Mus musculus (Rodentia)*
b. Mechanism of embryonic palate closure, and factors that interfere with it. *Mus musculus (Rodentia)*

FRASER, R. C. B.S., M.S., Ph.D. — Dept. of Zool. and Entomol., Univ. of Tennessee, KNOXVILLE 16, Tenn., U.S.A.
a. Physiological studies of early embryogeny. *Gallus domesticus (Aves)*
b. The role of the iodine carrier in metamorphosis. *Rana pipiens (Anura)*
c. Blood supply in limb regeneration. *Rana pipiens (Anura)*
d. Tumor growth in embryonate systems. *Gallus domesticus (Aves)*
e. Protein synthesis during liver growth. *Gallus domesticus (Aves)*

FRAZER, J. F. D. M.A., D.M., Ph.D. — The Nature Conservancy, 19 Belgrave Square, LONDON, S.W. 1, England
a. Morphology and activation of spermatozoa. *(Amphibia)*
b. Foetal growth rate. *(Cetacea)*

FRIANT, Mrs. M. Dr. ès Sci., Dr. en Méd., Membre titulaire du G.I.R.S., Prof. — Ecole d'Anthropologie de P. Broca, 55 Rue de Buffon, PARIS Ve, 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)*

FRIDBERG, G. Fil. lic. — Zootom. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden
a. Development of neurosecretory parts of brain, urophysis. *(Teleostei)*

FROST, D. M.S. — Coll. of Pharmacy, Rutgers Univ., 1 Lincoln Ave., NEWARK 4, N.J., U.S.A.
a. Causal analysis of factors governing lens regeneration. *Triturus viridescens (Urodela)*

FRYE, B. E. B.S., M.S., Ph.D. — Dept. of Biol., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.
a. Forelimb regeneration in depancreatized and insulin-treated adult animals. *Triturus viridescens (Urodela)*

b. Removal and transplantation of the dorsal pancreatic rudiment in larvae: effect upon growth and differentiation of the pancreas and the larvae. *Ambystoma punctatum (Urodela)*

FUJII, S. D.Sc., Prof. — Biol. Inst., Kobe Univ., KOBE, Japan

a. Developmental and genetical studies on the imaginal discs ("Bar", "Lobe" and eyeless mutants). *Drosophila melanogaster (Diptera)*

FUJII, T. Dr.Sci., Prof. — Zool. Inst., Fac. of Sci., Tokyo Univ., TOKYO, Japan

a. The nucleolus and its possible role in mitosis, as seen in living cells. *(Echinodermata; Mammalia)*
b. Chemical nature of the organizer. *(Amphibia)*

FUKUDA, S. D.Sc. — Katakura Sericult. Exper. Stat., MATSUMOTO City, Japan

FURUSAWA, M. M.Sc. — Dept. of Biol., Coll. of Sci., Osaka City Univ., Minami-Ogimati, Kita-ku, OSAKA, Japan

a. Analysis of development and differentiation of the embryonic gonad with the method of organ culture. *Mus musculus (Rodentia)*

GABIE (GUBBAY), Mrs. V. B.Sc., Ph.D. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, South Africa

a. The eye cup-lens correlation. *Rana angolensis (Anura)*
b. An investigation of the basal membrane in limb development by means of transplantation. *(Anura)*

GAILLARD, P. J. Med. Dr., Prof. — Lab. for Cytol. and exper. Histol., Fac. of Med., Univ. of Leyde, Rijnsburgerweg 10, Boerhaavekwartier, LEIDEN, Holland

a. Functional activity of the parathyroid gland in the embryo. *Gallus gallus (Aves)*

GALLERA, J. Ph.D., M.I.I.E. — Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue Ecole de Méd., GENÈVE, Suisse

a. Etude descriptive du développement de l'innervation du coeur. *Gallus* spec. *(Aves)* (en collaboration avec J. A. BAUMANN)
b. Développement du noyau tangentiel du nerf vestibulaire et de l'oreille. *Gallus* spec. *(Aves)* (en collaboration avec J. A. BAUMANN)
c. Etude expérimentale sur le développement histogénétique du système nerveux. *(Amphibia, Aves)*
d. Etude expérimentale sur l'induction du système nerveux par la méthode de greffes et d'explantation. *(Amphibia, Aves)*

GALLIEN, L. Dr. ès Sci., F.I.I.E., Prof. — Lab. d'Embryol., Fac. des Sci., Univ. de Paris, 12 Rue Cuvier, PARIS Ve, France

a. Détermination et différenciation du sexe. *(Amphibia)*
b. Hétéroploidie expérimentale. *(Amphibia)*
c. Organogenèse tête et tronc après traitement LiCl et SCNNa. *(Amphibia)*
d. Détection hormones embryonnaires (chromatographie). *(Vertebrata)*
e. Action des radiations sur stades initiaux du développement. *(Amphibia)*

GANGULY, B. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Regeneration in various electrolytic conditions. *(Porifera)*
b. Physiology of cell-contact. *(Porifera)* (in collaboration with S. MOOKERJEE and Miss M. CHOWDHURY)

GANGULY, D. N. M.Sc., D.Phil. — Cell Research Unit, Dept. of Zool., Calcutta Univ., 35 Ballygunje Circular Road, CALCUTTA 19, India

a. Development of the vertebral column. *Homo sapiens (Primates)* (in collaboration with S. K. BRAHMA)
b. Formation of the notochord. *Gallus domesticus (Aves)* (in collaboration with D. N. SARKAR)
c. Histochemical studies of the vertebral column during morphogenesis. *Bufo melanostictus (Anura)* (in collaboration with D. N. SARKAR)
d. Effect of neurohormones on development and metamorphosis. *Bombyx mori, Chrysocoris stolli, Macroceroea grandis* and other spp. *(Insecta)* (in collaboration with D. N. SARKAR, P. BARNARJEE, D. DEV, M. BANARJEE and B. BOSE)

GASSIOLE, Mrs. D. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France
a. Hématopoïèse. *(Aves)* (en collaboration avec A. DOLLANDER et G. CURY)

GATES, A. H. Ph.D. — R. B. Jackson Memorial Lab., Box 689, BAR HARBOR, Me., U.S.A.
a. Influence of ovogenesis and atresia upon response of prepuberal animals to exogenous gonadotropins. *Mus musculus (Rodentia)*
b. Response of adult females to gonadotropins as influenced by stage of the estrous cycle at treatment. *Mus musculus (Rodentia)*

GAWRONÓWNA, Miss M. M.Ph. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. The morphogenetical functions of the thyroid gland. *(Anura)*

GAYET, J. F. Dr. ès Sci., Prof. — Lab. de Physiol. Génér., 30 Rue Sainte-Cathérine, NANCY, France
a. Recherches expérimentales sur le développement biochimique et fonctionnel des lobes optiques. *Gallus domesticus (Aves)*
b. Recherches expérimentales sur la chronologie du développement biochimique au niveau de l'encéphale. *Gallus domesticus (Aves)* (en collaboration avec J. SCHWANDER)
c. Recherches expérimentales sur le développement cytochimique des lobes optiques. *Gallus domesticus (Aves)* (en collaboration avec Miss A. BONICHON)
d. Recherches expérimentales sur la biochimie et la biophysique des granules cytoplasmiques isolés du système nerveux central au cours du développement embryonnaire. *(Aves)*

GEIGER, H. R. Dipl.Zool. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz
a. Eiablage. *Culex pipiens, C. fatigans (Diptera)*

GEIGY, R. Dr., Prof. — Schweiz. Tropeninst., Socinstr. 57
— Zool. Anstalt der Univ., Rheinsprung 9, BASEL, Schweiz
a. Endocrinologie der Metamorphose (Xenoplastische Transplantation induktiver Organe). *(Insecta)*
b. Spermatogenese, Ovogenese und Embryonalentwicklung. *(Argasidae, Acarina, Arachnoidea, Isoptera)*
c. Uebertragung von Spirochaetosen über das mütterliche Ovarium auf die Embryonen und damit auf die Nachkommen der nächsten Generation. *(Ixodidae, Acarina, Arachnoidea)*
d. Gewebezüchtung. *(Arthopoda)*

GEILENKIRCHEN, W. L. M. M.Sc. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland

a. Metabolism and respiration of egg and embryo. *Limnaea stagnalis (Gastropoda)*
b. Influence of various kations on development. *Limnaea stagnalis (Gastropoda)* (in collaboration with Chr. P. RAVEN)
c. Influence of lithium on mitosis and cleavage. *Limnaea stagnalis (Gastropoda)* (in collaboration with E. D. NIJENHUIS and Chr. P. RAVEN)
d. Influence of various alcohols on development. *Limnaea stagnalis (Gastropoda)* (in collaboration with Chr. P. RAVEN)

GENNARO, J. F., Jr. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Florida, U.S.A.

GEORGE, J. C. Ph.D., Prof., F.Z.S., F.Z.S.I. — Dept. of Zool., Univ. of Baroda, BARODA 2, India *(Aves)*

a. Physiology of development. *Limnaea* spec. *(Gastropoda)*, *Gallus* spec.

GÉRARD, P. M.D., F.I.I.E., Prof.honor. — Fac. de Méd. de l'Univ., 97 Rue aux Laines, BRUXELLES, Belgique

GEYER (DUSZYŃSKA), Mrs. I. Dr. — Committee on Biophysics, Univ. of Chicago, 5640 Ellis Avenue, CHICAGO 37, Ill., U.S.A.

a. Genetic significance of the chromosomes of the germ line. *(Cecidomyidae, Diptera)*
b. Effects of ionizing radiation on chromosomes. *(Diptera)*
c. Experimental studies on germ line chromosomes. The fate of germ cells with somatic chromosome number. *(Cecidomyidae, Diptera)*

GHIRARDELLI, E. Dr., Prof. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia

a. Origin of germ-cells, development of gonads, gametogenesis, regeneration and reproductive biology. *(Chaetognatha)*
b. Regeneration and RNA. *(Turbellaria)*

GHOSAL, S. B.Sc. (Hons) — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Effects of cell free proteins on differentiation. *Gallus gallus (Aves)* (in collaboration with S. MOOKERJEE, S. ADHIKARI and Miss B. NURJEHAN)

GIDHOLM, L. Fil.kand. — Zool. Inst., Uppsala Univ., UPPSALA, Sweden

a. Larval development. *(Syllidae)*

GILANI, S. H. M.Sc. — Dept. of Zool., Government Coll., LAHORE, Pakistan

a. Reproduction and development. *Rana tigrina (Anura)*

GILBERT, Miss C. M.Sc., D.Sc.(Rand) — Physiol. Dept., Med. School, Univ. of Witwatersrand, Hospital Hill, JOHANNESBURG, S. Africa

GILBERT, P. W. A.B., Ph.D., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y., U.S.A.

a. Studies on reproductive habits and structures, especially the clasper mechanism and the function of the siphon sacs. *(Elasmobranchii)*
b. Gestation and parturition in representative species. *Urolophus jamaiciensis, Dasyatis americana (Elasmobranchii)*

GILES, E. T. M.Sc., Ph.D., D.I.C. — Dept. of Zool., Univ. of New England, ARMIDALE, N.S.W., Australia

a. Postembryonic development of reproductive organs and genitalia. *Labidura riparia truncata (Dermaptera)*

GILLMAN, J. D.Sc., M.B., Ch.B., Prof. — Physiol. Dept., Med. School, Univ. of Witwatersrand, Hospital Hill, JOHANNESBURG, South Africa
(no embryological work in progress)

GINSBURG, Mrs. A. S. Cand. Biol. Sci. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Cytology of fertilization; experimental polyspermy. *Huso huso, Acipenser güldenstädti, A. stellatus (Acipenseriformes, Chrondrostei)*

GINZBURG, G. I. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Action of DNA on morphogenesis. *Bombyx mori (Lepidoptera)* (in collaboration with Mrs. T. A. BEDNJAKOVA and Mrs. G. P. RAMENSKAIA)

GIPOULOUX, J. D. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351, Cours de la Libération, TALENCE (Gironde), France
a. Etude expérimentale de la morphogenèse de l'appareil génital. *(Anura)*

GIROUD, A. F.I.I.E., Prof. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Recherches sur l'influence tératogène des avitaminoses maternelles. *Mus rattus (Rodentia)*
b. Recherches sur l'influence tératogène des intoxications maternelles. *Mus rattus, Mus musculus, Cavia cobaya (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
c. Etude des cas tératologiques individuels. *Homo sapiens (Primates)*
d. Développement anormal de l'encéphale. *Mus rattus, Mus musculus (Rodentia)*

GITLIN, G. B.Sc., Ph.D., M.B., Ch.B. — Dept. of Anat., Hebrew Univ. Hadassah Med. School, P.O. Box 1172, JERUSALEM, Israel
a. Origin of epithelium of cervical canals of uterus. *Mus norvegicus* albinus *(Rodentia)*
b. Postnatal degeneration of metrial gland. *Mus norvegicus* albinus *(Rodentia)*
c. Site of blastocyst implantation. *Mus norvegicus* albinus *(Rodentia)*

GIUDICE, G. M.D. — Ist. di Anat. Comp., Via Archirafi 22, PALERMO, Italia
a. Biochemical and physiological activities of mitochondria during development. *Paracentrotus lividus (Echinoidea)*

GLASS, A. B.Sc., M.B., Ch.B. — Dept. of Anat., The Med. School, Univ. of Birmingham, Edgbaston, BIRMINGHAM 15, England
a. Effect of radiation on growth and function of central nervous system. *(Rodentia)*

GLENISTER, T. W. M.B., B.S., Ph.D. — Anat. Dept., 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. Implantation. *(Mammalia)*
c. The early embryology. *Macrorhinus* spec. *(Pinnipedia)*
d. Activation of spermatozoa with gonadotrophins. *(Amphibia, Mammalia)*

GLIMSTEDT, G. Med. Dr., Prof. — Tornblad-Inst. for comp. Embryol., Biskopsgatan 7, LUND, Sweden
(no embryological work in progress)

GLOOR, H. J. Ph.D., Prof. — Genet. Lab., State Univ., 5e Binnenvestgracht 8, LEIDEN, Holland
a. Differentiation in imaginal discs. *Drosophila melanogaster (Diptera)*

GOBETTO, A. Dott. — Ist. di Anat. veter., Via Nizza 52, TORINO, Italia
a. Morphogenesis and histogenesis of the walls of the oesophagus and prestomachs. *Ovis aries (Artiodactyla)*

GODINA, G. Prof. — Ist. di Anat. veter., Via Nizza 52, TORINO, Italia
a. Researches on the differentiation and growth in vitro of the neurons of the embryonic nervous centres. *Gallus domesticus (Aves)*
b. Various growth modalities of the neurites in in vitro explants of nervous tissue. *Gallus domesticus (Aves)*

GOEDBLOED, J. F. Med. Drs. — Anat.-Embryol. Lab. of the Univ., Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Development of the ear and the tympanic cavity. *Homo sapiens (Primates)*

GOFF, R. A. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of Oklahoma, NORMAN, Okla., U.S.A.
a. Analysis of the development of the appendicular skeleton by means of X-rays. *Gallus domesticus (Aves)*

GOLDIE, M. Ph.D. — Dept. of Zool., Louisiana State Univ., BATON ROUGE 3, La., U.S.A.
a. Ontogenesis and physiological regulation of enzymatic activity. *Gallus domesticus (Aves)*

GOMES FERREIRA, J. V. Dr. — Inst. de Histol. e Embriol., Fac. de Med., Avenida 28 de Maio, LISBOA, Portugal
(no embryological work in progress)

GOMOT, L. Dr. ès Sci. — Lab. de Zool., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France
a. Développement embryonnaire de la glande uro-pygienne. *(Aves)* (en collaboration avec H. LUTZ)

GONZALEZ, F. B.S., M.S., Ph.D. — Univ. of Texas Dental Branch, P.O. Box 20068, HOUSTON 25, Texas, U.S.A.

GONZÁLEZ GUZMÁN, I. Dr. — Instituto de Estudios Medicos y Biologicos, Univ., Nac. Auton., Apartado Postal Núm. 25228, C.U., MÉXICO, D.F., México
(no embryological work in progress)

GONZÁLEZ-RAMIREZ, J. M.D. — Inst. de Estudios Med. y Biol., Univ. Nac. Auton., Apartado Postal 8109, MÉXICO D.F., México
(no embryological work in progress)

GOODRICH, H. B. B.S., M.A., Ph.D., D.Sc. — Shanklin Lab. of Biol., Wesleyan Univ., MIDDLETOWN, Conn., U.S.A.
a. An experimental analysis of factors involved in the development of the color (pigment) pattern in the anal fin. *Brachydanio albolineatus (Cyprinidae, Teleostei)*

GOSS, R. J. A.B., A.M., Ph.D. — Arnold Biol. Lab., Brown Univ., PROVIDENCE 12, R.I., U.S.A.
a. Fin and taste barbel regeneration. *Ameiurus* spec. *(Pisces)*
b. Regeneration of lower jaws. *Triturus* spec. *(Urodela)*
c. Morphogenesis and regulation in limb regenerates. *Triturus* spec. *(Urodela)*
d. Regeneration of scales. *Fundulus heteroclitus (Teleostei)*
e. Antler growth. *Odocoileus borealis (Cervidae, Artiodactyla)*

GÖSZWALD, K. Dr.Phil., Dr.habil.rer.nat., Prof. — Inst. für Angewandte Zool. der Univ., Naturw. Fak., Röntgenring 10, WÜRZBURG, Deutschland

a. Development. *Formica risa (Hymenoptera)*

GOTHIÉ, Miss M. M. C. S. M.D., Dr.ès-Sci. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, Hopital Broca, 111, Rue L. M. Nordmann, PARIS XIII, France

a. Métabolisme du ^{35}S dans la physiologie de la reproduction. *(Mammalia)* (en collaboration avec R. MORICARD et Mrs. M. RODRIGUEZ (GALINDO))

b. Cytopathologie de la méiose dans les stérilités masculines et recherches sur certaines fonctions spermatiques au moyen des traceurs (^{32}P et ^{35}S). *(Mammalia)* (en collaboration avec R. MORICARD et N. GUILLON)

c. Contribution à l'étude de la membrane pellucide de l'oeuf à l'aide du ^{35}S. *Oryctolagus cuniculus (Lagomorpha)*

d. Répartition du ^{35}S dans la corne utérine en fonction de l'état ovarien. *Oryctolagus cuniculus (Lagomorpha)* (en collaboration avec V. A. HUYNH)

GOTO, T. M.A. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan

a. Studies on the purification of fluorescent substances and on their biological meaning. *(Amphibia)*

b. Studies on the influence of pterin substances upon development. *Bombyx mori (Lepidoptera), Rana nigromaculata (Anura)*

GOUBE de LAFOREST, P. Dr. en Méd., Laureat de la Fac. de Méd. de Paris — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tétarol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Application des cultures d'organes in vitro à la culture des virus.

GRABOWSKI, C. T. B.S., Ph.D. — Dept. of Anat., School of Med., Univ. of Pittsburg, 820 Health Professions Bldg., PITTSBURGH 13, Pa., U.S.A.

a. Experimental analysis of induction and early development of the central nervous system. *Gallus domesticus (Aves)*

b. Role of Hensen's node in early development. *Gallus domesticus (Aves)*

c. Development of the notochord forming system. *Gallus domesticus (Aves)*

d. Teratological effects of hypoxia. *Gallus domesticus (Aves)*

e. Effects of hypoxia on the embryonic vascular system. *Gallus domesticus (Aves)*

GRANT, Ph. M.A., Ph.D. — Dept. of Pathobiol., School of Hygiene and Public Health, Johns Hopkins Univ., BALTIMORE 5, Md., U.S.A.

a. Biochemistry of nuclear differentiation. *Rana pipiens (Anura)*

b. Nuclear differentiation in mosaic development. *Cerebratulus* spec. *(Nemertea, Plathelminthes)*

GRAUMANN, W. Dr.Med., Prof. — Anat. Inst. der Univ., Burgstr. 51, GÖTTINGEN, Deutschland

a. Histochemie von Entwicklungsprozessen, spec. Kohlenhydrate (zur Zeit: Eientwicklung, Implantation, Skeletogenese, Differenzierung endokriner Drüsen). *Mesocricetus auratus (Rodentia)*

GRAY, D. J. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Stanford Univ., STANFORD, Calif., U.S.A.

a. Prenatal development of bone. *(Aves), Homo sapiens (Primates)*

GRAY, J. Prof. — Univ. Museum of Zool., Univ. of Cambridge, Downing St. CAMBRIDGE, England

GRECA, M. LA Dr. Nat. Sci. — Ist. di Zool. dell'Università di Napoli, Via Mezzocannone 8, NAPOLI, Italia

a. Istologia e citologia delle gonadi, con particolare riferimento alla vitellogenesi. *(Orthoptera)*
b. Rigenerazione, con particolare riferimento ai blastemi regenerativi. *(Polychaeta)*

GREEN, Mrs. E. UFFORD A.B., M.A., Ph.D. — Dept. of Biol., Haverford Coll., HAVERFORD, Pa., U.S.A.

a. Morphological, cytological and cytochemical studies of the effects of carcinogens on early development and larval growth. *Rana* spec. *(Anura)*
b. Studies of mitotic and intermitotic times in embryos and tadpoles as related to age and to sizes of cells and nuclei. *Rana pipiens (Anura)*

GREGG, J. H. B.S., M.S., Ph.D. — Dept. of Biol., Univ. of Florida, GAINESVILLE, Florida, U.S.A.

GREGG, J. R. B.S., Ph.D. — Dept. of Zool., Duke Univ., DURHAM, N.C., 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)*

GREULICH, R. C. B.A., Ph.D. — Dept. of Anat., School of Med., Univ. of California, LOS ANGELES, Cal., U.S.A.

GRIGNON, G. Lic.ès Sci. — Lab. d'Histol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

a. Développement de l'hypophyse. *(Reptilia)*
b. Développement de l'organe sub-fornical. *(Mammalia)*
c. Développement de l'hypophyse. *(Aves)* (en collaboration avec G. CURY)

GRINTEN, S. J. v. d., S.J. B.Sc. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland

a. Analysis of the relationships between activation and transformation in neural induction (reversibility of transformation). *Ambystoma mexicanum (Urodela)*

GROBSTEIN, C. Ph.D., M.I.I.E. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Cal., U.S.A.

GRODZIŃSKI, Z. Prof. — Zakład Anat. Porównawczej U.J. im H. Hoyera, św. Anny 6, KRAKOW, Poland

a. Pulsation of embryonic hearts. *(Teleostei)*
b. Development of lymph heart. *Salmo trutta (Teleostei)*
c. Yolk. *(Elasmobranchii)*

GROENENDIJK (HUIJBERS), Mrs. M. M. M.D., D.Sc. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Canada

a. Investigation on the development of the sexual apparatus by means of implantation and castration experiments. *Gallus domesticus (Aves)*
b. Interrelation between gonads and pituitary gland of the embryo. *Gallus domesticus (Aves)*

GROSCH, D. S. B.S., M.S., Ph.D. — Genetics Dept., N.C. State College, 353 Gardner Hall, RALEIGH, N.C., 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)*

GRUENWALD, P. M.D. — Woman's Clinic, Johns Hopkins Hosp., BALTIMORE 5, Md., U.S.A.

GRÜNEBERG, H. Ph.D., M.D., D.Sc., F.R.S., F.I.I.E., Prof. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C. 1, England

a. Developmental genetics of the axial and appendicular skeleton; effects of major genes. *Mus musculus (Rodentia)*

GRÜNTHAL, E. Dr., Prof. — Hirnanat. Inst. der Psychiatr. Univ. Klinik, Med. Fak., Waldau, BERN, Schweiz

GUARDABASSI, Miss A. Dr. — Inst. of comp. Anat., Via Giovanni Giolitti 34, TORINO, Italy

a. Responses to thiouracil of the hypothalamo-hypophyseal system, hypophysis and thyroid of normal larvae and sugar albino larvae after prevention of adenohypophysis-hypothalamus connections. *Bufo b. bufo (Anura)* (in collaboration with V. MAZZI)

b. Observations on tadpoles treated with Ca^{45}. *Bufo b. bufo (Anura)*

c. The behaviour of hypophysis, thyroid and parathyroids of tadpoles after treatment with Ca-glycerophosphate. *Bufo b. bufo (Anura)*

GUGGENHEIM, P. A.B., M.D. — Dept. of Anat., School of Med., The Creighton Univ., OMAHA, Nebraska, U.S.A.

GUILLAUD, N. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, Hopital Broca, 111, Rue L. M. Nordmann, PARIS XIII, France

a. Physiologie de la maturation ovulaire et structure de la membrane pellucide de l'ovule observées en microscopie électronique. *(Mammalia)* (en collaboration avec R. MORICARD)

GUILLON, N. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, 111, Rue L. M. Nordmann, PARIS XIII, France

a. Cytopathologie de la méiose dans les stérilités masculines et recherches sur certaines fonctions spermatiques au moyen des traceurs (^{32}P et ^{35}S). *(Mammalia)* (en collaboration avec R. MORICARD et Miss M. M. C. S. GOTHIÉ)

GURDON, J. B. M.A. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England

a. Nuclear transplantation using endoderm nuclei. *Xenopus laevis (Anura)*

b. Nuclear transplantation between species. *(Anura)*

GUSTAFSON, T. Fil.Dr., M.I.I.E. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. Morphogenetic movements. *(Echinoidea)*

b. Enzyme adaptation in cell cultures.

c. The effect of various antimetabolites on embryonic development. *(Echinoidea)* (in collaboration with S. HÖRSTADIUS)

GUTH, L. A.B., M.D. — Lab. of Neuroanat. Sci., NINDB, Nat. Inst. of Health, BETHESDA, Md., U.S.A.

a. Neuronal specificity in the autonomic nervous system. *(Mammalia)*

GUYÉNOT, E. Dr. Med., Dr. Sci. — Inst. de Zool. et Anat. comp., Univ. de Genève, Rue de Candolle, GENÈVE, Suisse
(no embryological work in progress)

GYÉVAI, T. A. — Inst. of Histol. and Embryol., Med. Univ., Türzoltó u. 58, BUDAPEST IX, Hungary
a. Histological and histochemical investigations on the developing and adult heart. *Triturus cristatus (Urodela)*

GYLLENSTEN, L. J. W. Med. Dr. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden
a. Postnatal development of lymphatic system; endocrinological influences (thyroid, adrenals, thymus). *Cavia cobaya (Rodentia)*
b. Postnatal development of newborns in different oxygen concentrations, with special consideration to malformations of the eyes, lungs and central nervous system. *Mus musculus (Rodentia)*
c. Physiological factors in the postnatal development of the visual cortex. *Mus musculus (Rodentia)*

HACCIUS, Miss B. Dr., Prof. — Botan. Inst. der Univ., MAINZ, Deutschland
a. Beeinflussung der Entwicklung von Embryonen durch Chemikalien (Wachstumsregulatoren z.B. 2,4-D, TIBA, α NAA; Antimitotica z.B. IPC, MH, Colchicin; Radiomimetica z.B. N-Lost, TEM). *Eranthis hiemalis (Ranunculaceae)*
b. Untersuchungen über die Entwicklungsvorgänge an teratogen beeinflussten pflanzlichen Vegetationskegeln.

HADORN, E. Dr.Phil., F.I.I.E., Prof. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz
a. Merogonic development. *Triturus* spec. *(Urodela)*
b. Developmental studies on lethal factors. *Drosophila melanogaster (Diptera)*
c. Developmental studies on pteridine-synthesis. *Drosophila melanogaster (Diptera)*
d. Developmental studies on imaginal discs. *Drosophila melanogaster (Diptera)*

HAGELIN, L. O. Fil.mag. — Zootom. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden
a. Development of labyrinth organ. *Petromyzon* spec. *(Cyclostomata)*

HAGET, A. Dr.ès Sci. — Lab. de Zool., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE, Gironde, France
a. Analyse expérimentale de la morphogenèse embryonnaire de la tête. *Leptinotarsa* spec. *(Coleoptera)*

HÄGGQVIST, G. Prof. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden
a. Über die Einwirkung von schwerem Wasser auf die embryonale Entwicklung. *Mus musculus (Rodentia)*
b. Über die Entwicklung der roten Blutkörperchen bei tetraploiden Tieren. *(Vertebrata)*

HAGSTRÖM, B. E. Fil. Dr. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Factors influencing the rate of fertilization; the problem of protection against polyspermy. *(Echinoidea)*
b. Conditions enhancing cross fertilization. *(Echinoidea)*
c. Chromosomal behaviour in cross fertilization. *(Echinoidea)*

HALE, L. J. Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9. Scotland

a. Cell behaviour during growth and morphogenesis. *(Hydrozoa)*

HALL, E. K. Ph.D., D.Sc. — Dept. of Anat., School of Med., Univ. of Louisville, 101 West Chestnut St., LOUISVILLE 2, Ky., U.S.A.

a. Drug effects on embryonic hearts (atropine, nicotine, physostigmine). *Rattus norvegicus (Rodentia)*

HALLIDAY, R. B.Sc., Ph.D. — Agr. Res. Council Unit of Embryol., Dept. of Zool., Univ. of North Wales, BANGOR, Wales

a. Immunological relations of mother and young. *(Mammalia)*

HAMA, T. M.A., D.Sc., Prof. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan

a. Morphogenetical and chemical analysis of the organizer. *Triturus pyrrhogaster (Urodela)*
b. Studies on the influence of the pterins and their like upon development in various animals. *(Arthropoda; Pisces; Amphibia;* etc.)
c. Developmental and chemical studies of the chromatophores. *(Amphibia; Pisces)*

HAMANO, S. M.Sc., Dr.Sc. — Lab. of Physiol. & Ecol., Dept. of Biol., Fac. of Fish., Hokkaido Univ., HAKODATE, Japan

a. Physico-chemical studies on activation and fertilization. *(Teleostei)*

HAMBURGER, K. cand.mag. — Biol. Inst. of the Carlsberg Foundation, 16, Tagensvej, COPENHAGEN N., Denmark

a. Studies on the biochemistry and physiology of synchronized cell systems. *Tetrahymena pyriformis (Holotricha, Ciliata)* (in collaboration with E. ZEUTHEN and P. PLESNER)

HAMBURGER, V. Ph.D., F.I.I.E., Prof. — Dept. of Zool., Washington Univ., Lindell and Skinker Ave., ST LOUIS 5, Mo., U.S.A.

a. Neuro-embryology. *Gallus domesticus (Aves)*

HAMDORF, K. Dr. — Inst. für Fischereibiol. der Univ. Hamburg, Holstenwall 24, HAMBURG 36, Deutschland

a. Entwicklung unter verschiedenen Licht-, Temperatur- und O_2-Bedingungen. *Salmo irideus (Teleostei)*

HAMILTON, H. L. B.A., M.S., Ph.D., M.I.I.E. — Dept. of Zool. and Entomol., Div. of Sci., Iowa State Coll., AMES, Iowa, U.S.A.

a. Studies on the relation of enzyme systems to morphogenesis. *Gallus domesticus (Aves)*
b. Factors influencing the differentiation of melanophores in tissue cultures. *Gallus domesticus (Aves)*

HAMILTON, Miss L. B.A. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C. 1, England

a. Analysis of haploid syndrome. *Xenopus* spp. *(Anura)*
b. Morphogenesis of hybrid andromerogons. *Xenopus* spp. *(Anura)*
c. Morphogenetic effects of homologous DNA. *Ambystoma mexicanum (Urodela)*

HAMILTON, W. J. F.I.I.E., Prof. — Anat. Dept., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C. 2, England

a. Growth and atresia of the ovarian follicles. *Mustela putorius furo (Carnivora)* (in collaboration with R. J. HARRISON)
b. Placentation and changes in reproductive tract. *(Cervidae)* (in collaboration with R. J. HARRISON)
c. The development and structure of the placenta. *Homo sapiens (Primates)* (in collaboration with J. D. BOYD, Cambridge)

HAMMOND, W. S. Ph.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.
a. Development of the visceral skeleton. *Gallus domesticus (Aves)* (in collaboration with C. L. YNTEMA)
b. Origin of tongue musculature. *Gallus domesticus (Aves)*

HAMPÉ, A. Dr.ès Sci. — Lab. d'Embryol. expér. du Coll. de France, et Lab. d'Embryol. et de Tératol. expér. du C.N.R.S., 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Etude de la régulation des ébauches des membres. *Gallus gallus (Aves)*
b. Etude de la régulation du bourgeon de membre. *Anas* spec. *(Aves)*
c. Etude du développement du bourgeon de membre. *Gallus gallus (Aves)*

HANAOKA, K. I. D.Sc., Prof. — Inst. of Endocrinol., Gunma Univ., Iwagami-cho, MAEBASHI, Japan
a Experimental studies of sex differentiation. *Rana japonica, Rhacophorus schlegelii (Anura), Hynobius lichenatus, H. nigrescens, Triturus pyrrhogaster (Urodela)*
b. Neurosecretory hormone in relation to reproductive cycle. *Paratya compressa (Decapoda, Crustacea)*

HANSON, E. D. A.B., Ph.D. — Dept. of Zool., Gibbs Research Labs., Yale Univ., NEW HAVEN 11, Conn. U.S.A.
a. Fate of UV damaged feeding organelles during fission and autogamy. *Paramecium* spec. *(Holotricha, Ciliophora)*
b. Synthesis of ribonucleic acid during fission and autogamy. *Paramecium* spec. *(Holotricha, Ciliophora)*
c. The effect of anti-metabolites on the development of feeding organelles. *Paramecium* spec. *(Holotricha, Ciliophora)*

HARA, K. M.Sc. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland
a. Neural induction. *Gallus domesticus (Aves)*

HARADA, M. — Lab. of Embryol. and Exper. Morphol., Zool. Inst., Dept. of Sci., Kyoto Univ., KYOTO, Japan
a. Biochemical studies on metamorphosis. *Philosamia cynthia, Bombyx mori (Lepidoptera)*

HARDER, W. Dr. rer. nat. — Inst. für Fischereibiol. der Univ. Hamburg, Holstenwall 24, HAMBURG 36, Deutschland

HARKMARK, W. Dr.med. — Anat. Inst., Univ. of Oslo, OSLO, Norway
a. The histogenesis of the cerebellum with special emphasis on the Purkinje cells. *Gallus domesticus (Aves)*
b. The development of the hippocampus. *Mus rattus (Rodentia), Balaenoptera physalus (Cetacea)*

HARREBOMÉE, Miss A. E. — Div. of exp. Morphol., Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O, Holland
a. Studies on the mechanism of recovery from the effect of X-rays in regenerates. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

HARRIS, F. T. C. M.Sc. — Middlesex Hosp. Med. School, LONDON W. 1, England
a. Studies of cleavage processes.

b. Physiology of foetal kidney. *Rattus* spec. *(Rodentia)* (in collaboration with J. R. BEAM)

HARRIS, J. E. M.A., Ph.D., Prof. — Dept. of Zool., The University, BRISTOL 8, England

a. Development of the nervous system and behaviour pattern. *Scyliorhinus canicula, Petromyzon fluviatilis, Salmo* spp. *(Pisces)* (in collaboration with H. P. WHITING)

HARRIS, J. W. S. M.B., B.S. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E. 1, England

a. Closure of secondary palate. *Rattus norvegicus* (albino "hooded") *(Rodentia)*

HARRIS, M. A.B., Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Cal., U.S.A.

a. Tissue culture: protein growth factors; glycolysis, clone cultures and evolution of chromosome patterns; population dynamics and drug resistance. *Gallus domesticus (Aves), Sus domestica (Artiodactyla)*

HARRIS, P. F. M.B., Ch.B. — Dept. of Anat., Fac. of Med., Univ. of Sheffield, SHEFFIELD, England

a. Regeneration of basic cells in red bone marrow. *(Mammalia)*

HARRISON, G. A. B.A., B.Sc., D.Phil. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL 3, England

a. Growth and genetical selection and high temperatures. *(Mammalia)*
b. The inheritance of skin colour. *Homo sapiens (Primates)*
c. The genetics of obesity. *Mus* spec. *(Rodentia)*

HARRISON, J. R. B.A., M.A., Ph.D. — Dept. of Zool., Miami Univ., OXFORD, Ohio, 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. Effect of lowered incubation temperature on the development and potencies of the blastoderm. *Gallus domesticus (Aves)*

HARRISON, R. G. M.D., Ph.D., Sc.D., L.L.D., F.I.I.E., Prof. (Emer.) — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.

a. Development of limbs with reference to the roles played by ectoderm and mesoderm. *Ambystoma* (various species) *(Urodela)*
b. Induction and symmetry relations in the development of the internal ear. *Ambystoma punctatum (Urodela)*

HARRISON, R. G. M.A., D.M. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL, England

a. Factors influencing the process of spermatogenesis. *(Mammalia)*

HARRISON, R. J. M.A., D.Sc., M.D. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E. 1, England

a. Fine structure of the placenta. *(Mammalia)*
b. Growth and atresia of the ovarian follicles. *Mustela putorius furo (Carnivora)* (in collaboration with W. J. HAMILTON)
c. Placentation and changes in reproductive tract. *(Cervidae)* (in collaboration with W. J. HAMILTON)

HART, D. S. M.A. — Canterbury Agric. Coll., Lincoln Coll., CANTERBURY, New Zealand

HARTE, Miss C. Dr., Prof. — Inst. für Entwicklungsphysiologie, Univ. zu Köln, Gyrhofstr. 17, KÖLN-LINDENTHAL, Deutschland

a. Influence of genes on pollentube growth (certation) and embryosac development. *Oenothera* spec. *(Onagraceae), Antirrhinum* spec. *(Scrophulariaceae)*
b. Action of lethal genes on embryos and endosperm. *Oenothera* spec. *(Onagraceae)*

HARTUNG, E. W. Ph.D. — Dept. of Zool., Univ. of Rhode Island, KINGSTON, R.I., U.S.A.

HARTWIG, H. Dr.Phil. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland
a. Wirkungsmechanismus von Schilddrüsenhormon.

HARVEY, Mrs. E. BROWNE A.B., M.A., Ph.D., Sc.D., F.I.I.E. — Dept. of Biol., Princeton Univ., PRINCETON, N.J., U.S.A.
a. Centrifuging eggs, and development of fractions obtained by centrifugal force. Parthenogenetic merogony or development without nuclei. *(Echinoidea)*
b. Book, including classified compilation of all experimental work. *Arbacia punctulata (Echinoidea)*
c. Moving pictures of metamorphosis and of the natural history (in color). *Arbacia punctulata (Echinoidea)*
d. Determination of sex by electrical method. *Arbacia punctulata (Echinoidea)*
e. Prophase of the egg. *Arbacia punctulata (Echinoidea)*
f. Study of crescent-shaped figure in the egg. *Arbacia punctulata (Echinoidea)*
g. Effect of "theelin" on the egg. *Arbacia punctulata (Echinoidea)*

HARVEY, E. B. B.S., M.A., Ph.D. — Dept. of Zool. and Entomol., Montana State Coll., BOZEMAN, Montana, U.S.A.
(no embryological work in progress)

HASEGAWA, M. M.A. — Embryol. Div., Dept. of Anim. Husbandry, Fac. of Agriculture, Nagoya Univ., ANJO-City, Japan
a. Restitution of the eye after removal of the retina and lens. *(Teleostei)*
b. Regeneration of the liver. *Gallus domesticus (Aves)*

HAŠEK, M. M.D., M.I.I.E. — Dept. of Exp. Biol. and Genet., Inst. of Biol., Czechoslovak Acad. of Sci., Na cvičišti 2, PRAHA 6, Czechoslovakia
a. Experimental embryonic parabiosis. *Gallus domesticus, Meleagris gallipavo, Anas platyrhynchus, Numida meleagris (Aves)*
b. Natural embryonic parabiosis. *Ovis domestica (Artiodactyla)*
c. Interspecific "graft-hybrids" in tolerant animals. *Gallus domesticus, Meleagris gallipavo (Aves)*
d. Effect of intrauterine irradiation on development of the embryo. *Rattus rattus (Rodentia)*
e. Effect of the reduced immunological reactivity on distant crossing. *Gallus domesticus, Numida meleagris (Aves)*

HASSA, O. Dr.Veter.Sc. — Inst. of Histol. and Embryol., Veter. Coll. of the Univ., ANKARA, Turkey
(no embryological work in progress)

HATHAWAY, R. — Oceanographic Inst., Florida State Univ., TALLAHASSEE, Florida, U.S.A.
a. Release of S^{35} from labelled fertilizin by sperm. *Arbacia* spec. *(Echnoidea)* (in collaboration with C. B. METZ)

HAUENSCHILD, C. Dr.rer.nat. — Zool. Inst. der Univ., Katharinenstr. 20, FREIBURG i.Brsg., Deutschland
a. Lunarperiodizität, Neurosekretion, Metamorphose, Geschlechtsbestimmung. *Platynereis dumerilii (Polychaeta errantia)*
b. I-Zellen, Entwicklung, Stockdifferenzierung. *Campanularia johnstoni (Hydroidea Thecaphorae)*

HAY, Miss D. Lic.ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Analyse du processus de régulation et de paragénèse. *(Selachii)* (en collaboration avec J. H. VIVIEN)
b. Etude de l'entrée en jeu des correlations hypophyso-thyroidiennes. *Rana temporaria, Triturus cristatus (Amphibia)*
c. Morphogénèse et physiologie embryonnaire des glandes endocrines. *(Selachii; Teleostei; Amphibia)* (en collaboration avec J. H. VIVIEN et Miss J. SCHOTT)

HAYASHI, Y. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
— temporarily: Lab. of Chem. Embryol., Med. Center, Colorado Univ., 4200 East Ninth Ave, DENVER 20, Col., U.S.A.
a. Biochemical analysis of muscle differentiation. *Gallus* spec. *(Aves)*

HAYEK, H. Dr.med., Dr.phil., o.Prof. — Anat. Inst., Währingerstr. 13, WIEN 9, Oesterreich

HEATH, H. D. Ph.D. — Dept. of Zool., Univ. of Miami, CORAL GABLES 46, Florida, U.S.A.
a. Growth of larvally transplanted organs. *Ambystoma tigrinum (Urodela)*
b. Developmental phenomena investigated by means of biochemical assay of nematocyst migration. *Hydra littoralis (Hydroidea)*

HECKERMAN, R. O. B.S., M.S., Ph.D. — Dept. of Biol. Sci., Quincy Coll., QUINCY, Ill., U.S.A.
a. Differentiation of cells in the islet tissue of the embryonic pancreas. *Gallus domesticus (Aves), Sus domesticus (Mammalia)*
b. Islet tissue regeneration. *Gallus domesticus (Aves)*

HEILBRUNN, L. V. Ph.D., Prof. — Dept. of Zool., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

HEIM, W. G. A.B., M.A., Ph.D. — Dept. of Biol., Wayne State Univ., DETROIT 2, Mich., U.S.A.
a. Role of catalase in growth and neoplasia. *Mus musculus, Mus rattus (Rodentia)*
b. Serum proteins during ontogeny. *Gallus domesticus (Aves), Mus rattus (Rodentia)*

HEMMINGS, W. A. B.A. — Agr. Res. Council Unit of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
a. Immunological relations of mother and fetus. *(Mammalia)*

HENLEY, Miss C. M.A., Ph.D. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.
a. Studies in experimental cytology. *Polychoerus* spec. *(Acoela, Turbellaria), Nereis limbata, Chaetopterus* spec. *(Polychaeta), Ambystoma maculatum (Urodela)* (in collaboration with D. P. COSTELLO)
b. Effects of antimitotic agents on larval tail-tips. *Ambystoma maculatum (Urodela)* (in collaboration with D. P. COSTELLO)

HERLANT (MEEWIS), Mrs. H. Dr.Zool. — Lab. de Zool., Fac. des Sci., Inst. Zool. Torley-Rousseau, Univ. libre de Bruxelles, 50 Avenue F. D. Roosevelt, BRUXELLES, Belgique

HERRMANN, H. M.D., Prof. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.

a. Chemistry of muscle differentiation. *Gallus* spec. *(Aves)* (in collaboration with D. S. LOVE)

b. Biochemical study of growth and differentiation of explanted embryos. *Gallus* spec. *(Aves)* (in collaboration with N. W. KLEIN)

c. Biochemical analysis of protein synthesis in cornea and sclera. *Gallus* spec. *(Aves)* (in collaboration with Miss L. G. BRITT)

HERTIG, A. T. B.S., M.D., Prof. — Dept. of Pathol., Harvard Univ., Med. School, 25 Shattuck St., BOSTON 15, Mass., U.S.A.
— Boston Lying-in Hospital, 221 Longwood Ave., BOSTON 15, Mass.
— Free Hospital for Women, 245 Pond Ave., BROOKLINE, Mass.

a. Histochemical observations on early fertilized ova of less than 14 days age. *Homo sapiens (Primates)* (in collaboration with J. ROCK, W. J. MULLIGAN and Miss E. C. ADAMS)

b. Histochemical studies on developing embryos. *Homo sapiens (Primates)* (in collaboration with D. G. McKAY and Miss E. C. ADAMS)

c. Histochemical studies on abnormal trophoblast with special reference to hydatidiform mole and chorionepithelioma. *Homo sapiens (Primates)* (in collaboration with D. G. McKAY, K. BENIRSCHKE and Miss E. C. ADAMS)

HESS, O. Dipl.Biol., Dr.rer.nat. — Stazione Zool., Villa Comunale, NAPOLI, Italia

a. Entwicklungsphysiologie. *Bithynia tentaculata* and marine *Prosobranchiata (Gastropoda)*

b. Elektronenmikroskopie. Ungesättigte Fettsäuren in Eiern. *Tubifex* spec. *(Annelida)*

c. Elektronenmikroskopie. Ungesättigte Fettsäuren während der Regeneration. *Xenopus* spec. *(Unura)*

HEUSER, C. H. F.I.I.E., Prof. — Dept. of Microsc. Anat., Med. Coll. of Georgia, AUGUSTA, Ga., U.S.A.

HICKS, S. P. B.A., M.D. — Lab. of Pathol., New England Deaconess Hosp. & Harvard Med. School, 195 Pilgrim Road, BOSTON 15, Mass., U.S.A.

a. Ionizing radiation as an extirpative tool in experimental embryology. *Rattus* spec., *Mus* spec. *(Rodentia)*

b. Reproducible abnormalities of brain, especially cortex, from ionizing radiation during development. *Rattus* spec. *(Rodentia)*

HIGHNAM, K. C. M.Sc., Ph.D. — Dept. of Zool., Univ. of Sheffield, SHEFFIELD, England

a. Influence of hormones on metamorphosis and pupal diapause. *(Lepidoptera)*

HILFER, S. R. B.S., M.A. — Anat. Dept., Harvard Med. School, BOSTON, Mass., U.S.A.

a. Effect of pituitary extirpation on reamputation and regeneration of regenerating limbs. *Triturus viridescens (Urodela)*

b. Stability of dissociated embryonic thyroid cells as measured by morphological and chemical criteria of differentiation. *Gallus domesticus (Aves)*

HILLEMANN, H. H. B.S., M.A., Ph.D. — Dept. of Anat. and Embryol., Oregon State Coll., Ag Hall 320, CORVALLIS, Ore., U.S.A.

HINGLAIS (GUILLAUD), Mrs. N. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, Hopital Broca, 111, Rue L. M. Nordmann, PARIS XIII, France

a. Utilisation des techniques de microscopie électronique dans l'étude de l'ovogénèse. *(Mammalia)* (en collaboration avec R. MORICARD et R. CARTIER)

HINRICHSEN, K. Dr.Med. — Anat. Inst. der Univ., Burgstr. 51, GÖTTINGEN, Deutschland

a. Histochemie von Entwicklungsprozessen, spez. Ribonucleinsäure (Extremitätenentwicklung, Zahnentwicklung). *Mus musculus (Rodentia)*
b. Cytologische Geschlechtsdiagnostik. *Oryctolagus* spec. *(Lagomorpha)*
c. Endokrine Organe. *Mus musculus (Rodentia)*

HINTZSCHE, E. Dr.Med., Prof.ord. — Anat. Inst., Bühlstr. 26, BERN, Schweiz

a. Anorganischer Stoffwechsel. Fermentchemische Untersuchungen. *Homo sapiens* and other spp. *(Mammalia)*
b. Experimentelle Studien über Zellvermehrung in Gewebekulturen. Einwirkung fördernder und hemmender Substanzen. *Homo sapiens (Primates)*
c. Wirkung der Röntgen- und Betatronbestrahlung auf Gewebekulturen. *Mus* spec., *Homo sapiens (Mammalia)*

HIRAIWA, Y. K. D.Sc., Prof. — Lab. of Zool., Fac. of Agric., Kyushu Univ., FUKUOKA, Japan

HIRAMOTO, Y. D.Sc. — Misaki Marine Biol. Station, MISAKI, Kanagawa-ken, Japan

a. Cell division. *(Echinoidea)*
b. Physical properties of marine eggs. *(Echinoidea)*
c. Physiological studies on fertilization. *Hemicentrotus* spec., *Pseudocentrotus* spec., *Mespilia* spec., *Clypeaster* spec., *Peronella* spec. *(Echinoidea)*

HISAOKA, K. K. B.Sc., M.Sc., Ph.D. — Dept. of Biol., Loyola Univ., 6525 Sheridan Road, CHICAGO 26, Ill., U.S.A.

a. Histological and histochemical studies on the effect of 2-acetyl-aminofluorene on the embryos of egg-laying and live-bearing forms. *Mollienesia latipinna (Cyprinodontes, Teleostei)*
b. Methods of rearing embryos of live-bearing forms in vitro. *Lebistes reticulatus, Mollienesia latipinna, Heteradria formosa (Cyprinodontes, Teleostei)*
c. A study of spontaneous tumors (teratomata) in tropical forms. *Lebistes reticulatus (Cyprinodontes, Teleostei)*
d. A study of chemically-induced epidermal hyperplasia in the embryo. *Brachydanio rerio (Eventognathi, Teleostei)*

HISHIDA, T. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Metabolic analysis of early development. *Oryzias latipes (Teleostei)* (in collaboration with E. NAKANO)
b. Melanin formation in color phenotypes. *Oryzias latipes (Teleostei)* (in collaboration with T. YAMAMOTO and H. TOMITA)

c. Xanthophores and xanthophyll deposition in color phenotypes. *Oryzias latipes (Teleostei)*

HJELMMAN, G. Prof. — Anat. Inst., Univ. of Helsinki, HELSINKI, Finland
(no embryological work in progress)

HOADLEY, L. F.I.I.E., Prof. — Biol. Lab., Harvard Univ., Divinity Ave., CAMBRIDGE 38, Mass., U.S.A.

HOGE, A. — Instituto Butantan, SÃO PAULO, Brazil

a. Intersexuality. *Bothrops insularis (Ophidia)* (in collaboration with H. BELLUOMINI and G. SCHREIBER, Belo Horizonte)

HOGUE, Miss M. J. A.B., Ph.D., Prof. (Emer.) — Dept. of Anat., School of Med., Univ., of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

a. Tissue cultures of the central nervous system (brain, spinal cord, sympathetic and parasympathetic ganglia, neuroblastomas). The reaction of tissue cultures from normal and hypersensitized animals to polio virus. *(Mammalia)*

b. The effect on brain tissue cultures of viruses which cause clinical diseases of the central nervous system, such as herpes simplex, german measles, mumps, herpes zoster and chicken-pox. *Homo sapiens (Primates)*

HOLLANDER, W. F. B.A., M.S., Ph.D. — Dept. of Genetics, Iowa State Coll., AMES, Iowa, U.S.A.

a. Genetic mutants — polydactylism lethal types. *Mus musculus (Rodentia)*
b. X-ray induced dominant lethal effects. *Mus musculus (Rodentia)*
c. X-ray induced chromosome-translocation effects. *Mus musculus (Rodentia)*
d. Genetic mutants. *Columbia livia (Aves)*

HOLM, K. Å. Fil.Dr. — Zool. Inst., Uppsala Univ., UPPSALA, Sweden

a. Experimental investigation of the embryo (determination, prospective significance of embryonic areas). *(Araneae, Arachnoidea)*

HOLST CHRISTENSEN, P. J. Dr.Phil. — Inst. for Alm. Zool., Universitetsparken 3, COPENHAGEN Ø, Denmark

a. Continued investigations on embryology. *(Insecta)*
b. Studies on larval hair development. *(Lepidoptera)*
c. Studies on the development of the lungs. *(Mammalia)*

HOLTER, H. Ph.D., M.I.I.E. — Physiol. Dept., Carlsberg Lab., 10 Gl. Carlsbergvej, COPENHAGEN, Valby, Denmark
(no embryological work in progress)

HOLTFRETER, J. K. F. Ph.D., F.I.I.E., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER 20, N.Y., U.S.A.

a. Accessory tails "induced" by chemically inert substances. *Xenopus laevis (Anura)* *(Urodela)*
b. Studies on competence changes in aging ectoderm. *Pleurodeles Waltlii*
c. Production of a third median eye bij UV irradiation. *Ambystoma punctatum (Urodela)*

HOLTZER, H. Ph.D. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

HOLYOKE, E. A. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Nebraska, OMAHA 5, Nebraska, U.S.A.

HOOKER, D. Ph.D., Sc.D. (Hon.), M.I.I.E., Prof. (Emer.) — 110 Livingston St., NEW HAVEN 11, Conn., U.S.A.
— Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.

a. Study of the physiological responses of fetuses. *Homo sapiens (Primates)*
b. Study of the reactivity of the fetus to exteroceptive stimulation. *Homo sapiens (Primates)*
c. Responses of fetuses to double simultaneous stimulation. *Homo sapiens (Primates)* (in collaboration with Miss T. HUMPHREY)

HORI, R. M.Sc., D.Sc. — Biol. Inst., Fac. of Lib. Arts, Toyama Univ., Hasumachi 22, TOYAMA, Japan
a. Electrical phenomena accompanying fertilization. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea); Oryzias latipes (Teleostei)*
b. Ionic changes accompanying fertilization. *Oryzias latipes (Teleostei)*

HORN, E. C. B.S., A.M., Ph.D., Prof. — Dept. of Zool., Duke Univ., DURHAM, N.C., U.S.A.
a. Effects on tumor growth of antisera prepared against tumor cell components. *Mus musculus (Rodentia)*
b. The pattern of basic protein distribution during early embryonic development. *(Amphibia), Gallus* spec. *(Aves)*

HÖRSTADIUS, S. Fil.Dr., F.I.I.E., Prof. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Determination in the egg: Analysis of the gradients and the processes behind them. *(Echinoidea)*
b. Determination within the head. *Ambystoma* spec. *(Urodela)*
c. The effect of various antimetabolites on embryonic development. *(Echinoidea)* (in collaboration with T. GUSTAFSON)

HORSTMANN, E. Dr.Med. et Phil., Prof. — Anat. Inst. der Univ. Kiel, Neue Univ., Haus 30, KIEL, Deutschland
a. Embryology of neuroglia. *(Vertebrata)*
b. Development of capillarisation in the brain. *Mus rattus, Cavia cobaya, Homo sapiens (Mammalia)*

HORSTMANN, H. J. Dr.phil.nat. — Physiol.-chemisches Inst. der Univ., Wasserturmstr. 5, ERLANGEN, Deutschland.
a. Kohlhydrat-Stoffwechsel von Embryonen. *Lymnaea stagnalis (Gastropoda)*

HUBER, W. D.Sc. — Muséum d'Histoire Naturelle, BERNE, Suisse
a. Développement de la tête. Etude morphologique et expérimentale de la forme encéphalique en rapport avec le crâne; courbures et redressement de la tête embryonnaire; position des yeux; analyse des races à forme encéphalique aberrante. *Gallus domesticus (Aves), Canis familiaris (Carnivora)*

HUBL, H. Dr.rer.nat. — Zool. Inst. der Univ. Würzburg, Röntgenring 10, WÜRZBURG, Deutschland
a. Untersuchungen über die neurosekretorischen Zellen im Gehirn und deren Einfluss auf die Regeneration. *(Lumbricidae, Oligochaeta)*
b. Weitere Untersuchungen über die Beziehungen zwischen Nervensystem und Regeneration. *(Lumbricidae, Oligochaeta)*

HUBLÉ, J. Dr.Zool.Sci. — Lab. voor Zool., Afd. Morphol., Universiteitstr. 14, GENT, België

HUGHES, A. F. W. M.A., Ph.D., Sc.D. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

a. Experimental neuro-embryology

HULTIN, J. M. T. Ph.D., M.I.I.E. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. The role of the different cell components in determination and differentiation. *(Echinoidea)*

HUMMEL, Miss K. P. Ph.D. — Roscoe B. Jackson Memorial Lab., BAR HARBOR, Me., U.S.A.

a. Studies on histogenesis of anomalies resulting from the gene "disorganization". *Mus musculus (Rodentia)*

b. Studies on the development of situs viscerum inversus resulting from a recessive gene. *Mus musculus (Rodentia)*

HUMPHREY, R. R. A.M., Ph.D., F.I.I.E., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.

a. Experimental and genetic studies on certain lethal and sub-lethal traits. *Ambystoma mexicanum (Urodela)*

b. Studies on maternal inheritance (auxocytoplasmic inheritance) of certain lethal or sub-lethal traits. *Ambystoma mexicanum (Urodela)*

c. Cytological studies on a maternal effect in blastulae. *Ambystoma mexicanum (Urodela)* (in collaboration with R. W. BRIGGS)

HUMPHREY, Miss T. M.D., Ph.D., M.I.I.E. — Dept. of Anat., School of Med., Univ. of Pittsburgh, 820 Health Professions Bldg., PITTSBURGH 13, Pa., U.S.A.

a. Continuation of studies on the trigeminal nerve in fetuses. Morphological study based on serially sectioned, pyridine silver impregnated embryos. Correlation of the anatomical findings on embryos with neurological observations and neurosurgical procedures. *Homo sapiens (Primates)*

b. Pancreatic developmental studies. *Homo sapiens (Primates)*

c. Responses of fetuses to double simultaneous stimulation. *Homo sapiens (Primates)* (in collaboration with D. HOOKER)

d. Pyramidal tract development correlated with cortical differentiation. *Homo sapiens (Primates)*

HUMPRIES, A. A., Jr. Ph.D. — Dept. of Biol., Emory Univ., ATLANTA 22, Ga., U.S.A.

a. Natural inhibition of meiosis in unfertilized oocytes. *Triturus viridescens (Urodela)*

b. Developmental genetics. *Triturus viridescens (Urodela)*

c. Chemistry and physiology of egg jellies. *(Amphibia)*

HUNT, E. L. Ph.D., Prof. — Dept. of Biol., Emory Univ., ATLANTA 22, Ga., U.S.A.

a. Studies on the distribution of radio-iodine. *(Amphibia)*

b. Studies on the estrus cycle and gestation in alloxan-diabetic animals. *Rattus norvegicus (Rodentia)*

HUYGNARD, C. Dr. en Méd., Dr.ès Sci. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Désensibilisation à la greffe. *Mus rattus (Rodentia)*

HUYNH, V. A. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, 111, Rue L. M. Nordmann, PARIS XIII, France

a. Répartition du ^{35}S dans la corne utérine en fonction de l'état ovarien. *Oryctolagus cuniculus (Lagomorpha)*

HYLBOM, J. R. Fil.lic. — Zootom. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Zweden

a. Development of larvae, including metamorphosis. *(Nemertini)*

ICHIKAWA, A. M.Sc., D.Sc., Prof. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
a. Development and life-history of Japanese forms. *(Rhizocephala,* and parasitic *Isopoda; Crustacea)*
b. Regeneration. *(Turbellaria)*

ICHIKAWA, M. Ph.D., Prof. — Lab. of Embryol. and Exper. Morphol., Zool. Inst., Dept. of Sci., Kyoto Univ., KYOTO, Japan
a. Hormonal mechanism of metamorphosis. *Philosamia cynthia ricini, Bombyx mori, Luehdorfia japonica (Lepidoptera)* (in collaboration with Mrs. J. NISHIITSUTSUJI (UWO))

IGNATJEVA, Mrs. G. M. Cand. Biol. Sci. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. The hatching enzyme and the conditions of hatching. *Huso huso, Acipenser güldenstädti, A. stellatus (Acipenseriformes, Chondrostei)*
b. Regional induction capacities of the chorda-mesoderm. *Huso huso, Acipenser güldenstädti, A. stellatus (Acipenseriformes, Chondrostei)*

IJEIRI, Miss S. M.Ed. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Inductive effects of embryonic juice. *Triturus pyrrhogaster (Urodela), Gallus domesticus (Aves)*
b. Cytochemical studies on limb regeneration. *Triturus pyrrhogaster (Urodela)*

IKUSHIMA, N. — Lab. of Embryol. and Exper. Morphol., Zool. Inst., Dept. of Sci., Kyoto Univ., KYOTO, Japan
a. Mechanism of the morphogenetic movement in the embryo. *Triturus pyrrhogaster, Hynobius nebulosus (Urodela)*

IMAIZUMI, T. — Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan
a. Studies on the hereditary lethals. *Drosophila* spec. *(Diptera)*

IMMERS, J. lic.phil. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Biochemical factors in development, particularly the role of mucopolysaccharides. *(Echinoidea)*

INCE, Miss F. E. M.Sc. — Dept. of Zool., Bedford Coll., Regent's Park, LONDON N.W. 1, England
a. Development. *Arion* spec. *(Pulmonata, Gastropoda)*
b. Development of embryonal membranes. *Anguis fragilis (Lacertilia)*

INGEN, Miss H. C. van M. B. — Anat.-Embryol. Lab. of the Univ., Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Heart and vessels in congenital malformations. *Homo sapiens (Primates)* (in collaboration with H. A. SNELLEN, J. DANKMEIJER and Miss A. DEKKER)
b. Ductus arteriosus before and after birth. *Mus norvegicus* albinus *(Rodentia), Homo sapiens (Primates)*

INOUE, Miss K. Dr. — Dept. of Pathol., School of Med., Univ. of Kanazawa, KANAZAWA, Japan

INOUE, S. — Inst. of Endocrinol., Gunma Univ., Iwagami-cho, MAEBASHI, Japan
a. Neuronal and hormonal influence on regeneration. *Rana catesbiana, Triturus pyrrhogaster (Amphibia)*

b. Nature of spontaneous tumor. *Triturus pyrrhogaster (Urodela)*

INOUYE, I. — Biol. Lab., Dept. of Sci., Kônan Univ., Okamoto. KOBE, Japan

a. Chemical phenocopies. *Drosophila melanogaster (Diptera)* (in collaboration with H. TAKAYA and S. KAJI)

ISHIDA, J. Dr.Sci. — Zool. Inst., Fac. of Sci., Tokyo Univ., TOKYO, Japan

a. Phosphorus metabolism in eggs. *Oryzias* spec. *(Teleostei)*

ISHIHARA, K. M.Sc. — Dept. of Biol., Saitama Univ., URAWA, Japan

a. Metabolism of fatty acid in eggs. *Hemicentrotus pulcherrimus (Echinoidea)*

ISHIKAWA, M. M.A. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, Japan

a. Physiological studies on fertilization and artificial parthenogenesis. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)* (in collaboration with M. SUGIYAMA)

ISHIKAWA, T. Dr. — Dept. of Pathol., School of Med., Univ. of Kanazawa, KANAZAWA, Japan

ISINGS, J. M.Sc. — Central Lab., T.N.O., Julianalaan 134, DELFT, Holland

ISLAM, A. Ph.D. — Dept. of Zool., Government Coll., LAHORE, Pakistan

a. The early embryology. *Bufo melanostictus (Anura)*

b. Organogenesis. *Uromastix hardwickii (Lacertilia)*

ITO, Sh. — Dept. of Biol., Fac. of Sci., Kumamoto Univ., KUMAMOTO-Shi, Japan

a. Studies on activation. *Oryzias latipes, Plecoglossus altivelis (Teleostei)*

b. Permeability of the egg at the time of fertilization. *Oryzias latipes, Plecoglossus altivelis (Teleostei)*

c. Effect of outer medium upon the cortical change. *Plecoglossus altivelis (Teleostei)*

d. Electrical properties of the egg. *Oryzias latipes (Teleostei)*

ITO, T. Dr.Agr. — Sericult. Exper. Stat., Koenji, Suginami-ku, TOKYO, Japan

a. Respiratory metabolism during metamorphosis. *Bombyx mori (Lepidoptera)*

b. Histology and cytology of the integument. *Bombyx mori (Lepidoptera)*

c. Function of the midgut in relation to growth and nutrition. *Bombyx mori (Lepidoptera)*

IWASAWA, H. M.Sc. — Sado Marine Biol. Station, AIKAWA, Sado Island, Japan

a. Embryological study on endocrine correlation. *(Pisces, Amphibia)*

JACOBS, W. P. M.A., Ph.D. — Dept. of Biol., Princeton Univ., PRINCETON, N.J., U.S.A.

a. Compensatory growth of shoots, including "apical dominance"; internal limiting factor for differentiation of xylem cells and sieve-tube cells; and for longevity of shoot organs. *Coleus blumei* Benth.

b. Internal limiting factors for transport of auxin (a plant growth-hormone) in living tissue. *Coleus blumei* Benth.

JACOBSON, A. G. A.B., Ph.D. — Dept. of Zool., Univ. of Texas, AUSTIN 12, Texas, U.S.A.

a. Induction of the lens of the eye by the synergistic action of neural and non-neural inductors. *Taricha torosa (Urodela)*

b. Tissue interactions between ectoderm and mesoderm and between endoderm and mesoderm that affect heart differentiation. *Taricha torosa (Urodela)*

JACOBSON, D.C.-O. Fil.lic. — Zool. Inst., Uppsala Univ., UPPSALA, Sweden

a. Determination of the central nervous system. *Ambystoma* spec. *(Urodela)*

JAFFE, L. F. B.S., Ph.D. — Dept. of Biol., Brandeis Univ., WALTHAM 54, Mass., U.S.A.

a. Development of polarity of spore; studied by analyzing effects of polarized irradiation. *Funaria hygrometrica (Bryophytes)*

JAFFEE, O. C. B.A., M.S., Ph.D. — Chronic Disease Research Inst., The Univ. of Buffalo, 2211 Main St., BUFFALO 14, N.Y., U.S.A.

a. The development of the blastula. Cavity formation in hypertonic media, chiefly sucrose. Histochemical studies. *Rana pipiens (Anura)*

b. The effect of modified vascular patterns on the development of the heart. Partial or total unilateral removal of the gills. *Rana pipiens (Anura)*

JAGER, B. de M.Sc. — Div. of Fisheries, Beach Road, Sea Point, CAPE TOWN, South Africa

a. Embryology. *Trachurus trachurus (Percomorphi, Neopterygii)*

JÄGERSTÉN, K. G. M. Fil.Dr., Prof. — Zool. Inst., Uppsala Univ., UPPSALA, Sweden

a. Larval development. *(Progonophora)*

JANSEN, J. M.D. — Anat. Inst., Univ. of Oslo, OSLO, Norway

a. Early development of the hypophysis. *Balaenoptera physalus (Cetacea)*

JAYA, Miss Y. M.B., B.S., Ph.D., Prof. — Dept. of Anat., Gandhi Med. Coll., HYDERABAD, A.P., India

JELÍNEK, R. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA II, Czechoslovakia

JIRÁSEK, J. MUDr. — Embryolog. ústav lékařské fak. Univ. Karlovy, Albertov 4, PRAHA II, Czechoslovakia

a. Histogenesis of gonads. *Homo sapiens (Primates)*

b. Histochemistry in embryology. *Homo sapiens (Primates)*

JIT, I. M.B., M.S., Ph.D. — Dept. of Anat., Med. Coll., AMRITSAR, Punjab, India

a. Histogenesis of the gall-bladder. *Homo sapiens (Primates)*

b. Level of termination of the spinal cord in the pre-natal period. *Homo sapiens (Primates)*

c. Development of the splanchnic nerves. *Homo sapiens (Primates)*

d. Prenatal ossification of some bones. *Homo sapiens (Primates)*

e. Development of the transverse folds of the rectum. *Homo sapiens (Primates)*

JOCHEMS, D. J. — Div. of exp. Morphol., Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O, Holland

a. Attempts to analyze the differences in regenerative capacity between Amphibia and Mammalia. *Ambystoma mexicanum (Urodela)*, *Mus* spec. *(Rodentia)* (in collaboration with H. A. L. TRAMPUSCH)

JOHANSSON, A. S. Dr., Prof. — Zool. Lab., Univ. of Oslo, OSLO-Blindern, Norway

(no embryological work in progress)

JOHNELS, A. G. Phil.Dr. — Swedish Museum of Nat. Hist., Vertebrate Dept., STOCKHOLM 50, Sweden

a. Development and morphology of the autonomic nervous system. (Lower *Vertebrata)*

JOHNEN, Miss A. G. Dr.Phil. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland

a. Die Wirkungsspezifität abnormer Induktoren in der Entwicklung. *(Amphibia)*
b. Die Bedeutung des Zeitfaktors beim Induktionsvorgang. *Ambystoma* spec., *Triturus* spec. *(Urodela)*

JOHNSON, D. C. B.S., M.S., Ph.D. — Dept. of Zool., State Univ. of Iowa, P.O. Box 585, IOWA CITY, Iowa, U.S.A.

a. Physiology of reproduction: hypophyseal-gonadal interrelationships by the use of parabiosis.

JOHNSON, E. M. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Florida, U.S.A.

a. Teratology.

JOHNSON, G. Lic.ès Sci. — Lab. de Zool., Fac. des Sci., POITIERS, Vienne, France

JONES, B. M. D.Sc. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Surface chemical properties of extra-embryonic fluid. *Locusta migratoria (Orthoptera), Gallus gallus (Aves)*
b. In vitro cultivation of embryonic tissues. *(Insecta)*

JONES, O. P. Ph.D., M.D. — Dept. of Anat., Univ. of Buffalo Med. School, 3435 Main St., BUFFALO 14, N.Y., U.S.A.

a. Embryonic blood cells in the yolk sac. *Rattus* spec. *(Rodentia)*
b. Electron microscopy of hepatic hematopoiesis. *Rattus* spec., *Homo sapiens (Mammalia)*

JONES, W. E. B.Sc., Ph.D. — Marine Biol. Station, Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales

a. Spore division and early development of thallus. *(Rhodophyceae; Gigartinales)*

JOST, A. D. Dr.Sc., M.D.(hon.c.), M.I.I.E., Prof. — Lab. de Physiol. comp., Fac. des Sci., Univ. de Paris, 12 Rue Cuvier, PARIS Ve, France

a. Endocrinologie foetale. *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
b. Différenciation sexuelle. *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
c. Anomalies héréditaires ou expérimentales des extrémités *(acroblapsie). Mus musculus, Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

JOUBERT, D. M. M.Sc.(Agric.), Ph.D. — Dept. of Animal Husbandry, Univ. of Pretoria, PRETORIA, South Africa
(no embryological work in progress)

JURA, Cz. D.Sc. — Zool. Dept. of the Jagiellonian Univ., St. Anne 6, KRAKOW, Poland

a. Experimental studies on development. *Melasoma populi (Coleoptera)*
b. Histochemical studies on development. *Melasoma populi (Coleoptera)* (in collaboration with Miss A. KRZYSTOFOWICZ and Miss B. WĘGLARSKA)

JURAND, A. Dr.Biol. — Biol. and Embryol. Inst., Med. Acad., KRAKOW, Poland

KAJI, S. — Biol. Lab., Dept. of Sci., Kônan Univ., Okamoto, KOBE, Japan
a. Chemical influence upon the facet-forming faculty of the Bar eye. *Drosophila* spec. *(Diptera)*
b. Chemical phenocopies. *Drosophila melanogaster (Diptera)* (in collaboration with H. TAKAYA and I. INOUYE)

KAJISHIMA, T. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Experimental analysis of the development of genetical characters. *Carassius auratus (Teleostei)*

KÄLIN, J. Prof. — Zool.-vergl. anat. Inst. der Univ., FREIBURG, Schweiz

KÄLLÉN. A. J. B. M.D. — Tornblad-Inst. for comp. Embryol., Biskopsgatan 7, LUND, Sweden
a. Regulation of mitotic rate in developing neural tube. *Xenopus laevis (Anura)*
b. Experimental brain tumour formation in embryos. *Gallus domesticus (Aves)*
c. Cell division in nervous system. *Gallus domesticus (Aves)*

KALTENBACH, Mrs. J. COUFFER. B.S., M.A., Ph.D. — Dept. of Zool., Mount Holyoke Coll., SOUTH HADLEY, Mass., U.S.A.
a. Serological study of proteins during early development. *Paracentrotus lividus (Echinoidea)* (in collaboration with H. P. PERLMANN, Stockholm, Sweden)
b. Direct, local metamorphic effects by thyroxine and thyroxine analogues. *Rana pipiens (Anura)*
c. Effects of steroid hormonus upon thyroxine induced metamorphosis. *Rana pipiens (Anura)*

KAMEL, A. B.Sc., Ph.D. — Fac of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt

KAMER, J. C. van de Dr.Sc. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland
a. Normal development and cytology of the pineal region. *Anoptichthys Jordanii (Teleostei)*

KAMEYAMA, Y. M.D., D.Med.Sci. — Research Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan
a. Study on the manifestation of common pathological changes observed in early stages of developing malformations of the central nervous system. *Mus musculus (Rodentia)* (in collaboration with U. MURAKAMI)
b. Effects of ionizing radiation upon the embryo. *Mus musculus (Rodentia)* (in collaboration with U. MURAKAMI)

KANAGASUNTHERAM, R. M.B.B.S., Ph.D. — Dept. of Anat., Fac. of Med., Univ. of Ceylon, Kynsey Road, COLOMBO 8, Ceylon

KANATANI, H. B.Sc., M.A. — Misaki Marine Biol. Station, Kanagawa-ken, MISAKI, Japan
a. Supplementary eye formation. *Dugesia gonocephala (Turbellaria)*
b. Bipolar head formation. *Dugesia gonocephala (Turbellaria)*
c. Fission. *Dugesia gonocephala (Turbellaria)*

KANOH, Y. D.Sc. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
a. Electronmicroscope observation of spermatozoa and fertilization process. *(Cyclostomata; Teleostei; Amphibia)*

b. Cytochemical investigations on development. *(Teleostei)* (in collaboration with T. S. YAMAMOTO)

KARASAKI, S. B.Sc., M.A., Dr.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Electronmicroscopic study of elaboration of the cell structures during the early phase of differentiation. *(Amphibia)*
b. Ultrastructure of yolk platelets studied by electronmicroscopy and electron diffraction. *(Amphibia)*

KATAKURA, Y. M.A. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan
a. Development of the sex characters. *Armadillidium vulgare (Isopoda, Crustacea)*

KATHIRESAN, S. M.B., B.S. — Dept. of Anat., Madurai Med. Coll., MADURAI, South India
a. Development of the nail. *Homo sapiens (Primates)*

KATO, K. — Div. of Genet., National Inst. of Radiol. Sci., Kurosunacho, CHIBA, Japan
a. Mechanism of mesodermal differentiation. *Triturus pyrrhogaster (Urodela)*

KATO, M. Ph.D. — Lab. of Embryol. and Exper. Morphol., Zool. Inst., Dept. of Sci., Kyoto Univ., KYOTO, Japan
a. Mechanism of pigment formation. *Bombyx mori, Papilio xuthus hondoensis, Philosamia cynthia ricini (Lepidoptera)*

KATO, M. B.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. The mechanism of Wolffian lens regeneration. *(Amphibia)*

KATSH, S. B.A., M.S., Ph. D. — Dept. of Pharmacol., Univ. of Colorado Med. Center, 4200 E. 9th Ave., DENVER 20, Colo., U.S.A.
a. Anti-fertility and anti-spermatogenic antibodies: their respective antigens and sites of action. *(Mammalia)*

KAWAKAMI, I. M.Sc., D.Sc., M.I.I.E., Prof. — Dept. of Biol., Kyushu Univ., FUKUOKA, Japan
a. Organizing substances in tissues. *(Mammalia)*
b. Effects of chemicals on development. *(Amphibia)*, *Gallus* spec., *Mus* spec. *(Amniota)*
c. Special inductive capacities of cancer tissues. *(Amphibia; Mammalia)*
d. Fractionation of inductive agents. *Gallus domesticus (Aves)*

KAWAKAMI, Mrs. K. I. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Mechanism of regeneration. *Eisenia foetida (Oligochaeta)*
b. Effects of chemicals on development. *Gallus* spec. *(Aves)*
c. Calcium metabolism and pearl-sac formation. *Pinctada martensii (Mollusca)*
d. Mechanism of pearl-sac formation. *Pinctada martensii (Mollusca)*
e. Spawning of germ-cells. *Pinctada martensii (Mollusca)*

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)*

KELLY, W. A. B.Sc. — Wye Coll., Near Ashford, Kent, England
a. Effects of lethal genes on embryonic development. *Gallus domesticus (Aves)* (in collaboration with D. A. EDE)

b. Effects of tumour-inducing viruses on embryonic and early development. *Gallus domesticus (Aves)* (in collaboration with D. A. EDE)

KEMP, N. E. Ph.D., M.I.I.E. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich., U.S.A.

a. Use of radioactive isotopes as tracers in studies on the mechanism of synthesis of yolk. *Rana pipiens (Anura)*
b. Morphogenesis and metabolism of larvae after excision of heart. *Rana pipiens, Ambystoma punctatum (Amphibia)*
c. Electron microscopy of developing oocytes with special reference to the development of yolk and egg membranes (comparative study). *Evertebrata, Vertebrata)*
d. Changes in the cortical cytoplasm following fertilization. *Fundulus heteroclitus (Pisces)*
e. Differentiation of submicroscopic structure in developing animals. *(Evertebrata, Vertebrata)*

KERR, N. S. A.B., M.S., Ph.D. — Dept. of Zool., Coll. of Sci., Lit. and Arts, Univ. of Minnesota, MINNEAPOLIS 14, Minn., U.S.A.

a. The morphogenesis of non-flagellated amoeba to flagellated amoeba, of amoeba to gametes, of zygotes to plasmodia, and of plasmodia to fruiting bodies. *Didymium nigripes (Eumycetozoina)*
b. Developmental genetics. *Didymium nigripes (Eumycetozoina)*

KIDO, T. D.Sc. — Zool. Inst., Fac. of Sci., Univ. of Kanazawa, KANAZAWA, Japan

a. Analysis of mechanism of pharynx-formation. *Dugesia gonocephala (Turbellaria)*
b. Depigmentation of eye after treatment with thiourea and iodine. *Dugesia gonocephala (Turbellaria)*

KIEŁBÓWNA, Miss L. M.Ph. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland

a. The morphogenetical functions of the thyroid gland and hypophysis. *(Amphibia)*

KIENY, Mrs. M. A. Dr. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Recherches sur la morphogenèse et les besoins nutritifs des os de cartilage en culture in vitro. *Gallus gallus (Aves)*
b. Problèmes relatifs aux causes de l'achondroplasie. *Gallus gallus,* var. Creeper *(Aves)* (en collaboration avec Et. C. WOLFF)

KIHLSTRÖM, J.-E. Fil.Dr. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

a. Movements of spermatozoa. *(Mammalia)*

KILLE, R. A. B.Sc., Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Fertilization. *Lampetra* spec. *(Cyclostomata)*

KINDAHL, Miss M. E. Ph.D. — Linnégatan 22, STOCKHOLM Ö, Sweden

a. The development of the teeth. *(Insectivora)*

KING, R. C. Ph.D. — Cresap Lab., Northwestern Univ., EVANSTON, Ill., U.S.A.

a. Oogenesis. *Drosophila melanogaster (Diptera)*

KING, Th. J. B.S., M.S., Ph.D. — Inst. for Cancer Research, 7701 Burholme Avenue, PHILADELPHIA 11, Pa., U.S.A.
a. Transplantation of embryonic nuclei into activated body cavity eggs. *Rana pipiens (Anura)* (in collaboration with S. SUBTELNY)
b. Transplantation of tumor (Lucké renal adenocarcinoma) nuclei into enucleated eggs. *Rana pipiens (Anura)* (in collaboration with R. G. McKINNELL)
c. Studies on nuclear differentiation in embryos. *Rana pipiens (Anura)* (in collaboration with R. W. BRIGGS)

KING, T. S. M.B., Ch.B. — Dept. of Anat., Fac. of Med., Univ. of Sheffield, SHEFFIELD, England
a. Histological studies of the cardiac conducting system. *(Cetacea; Carnivora)*

KINOSITA, H. Dr.Sci., Prof. — Zool. Inst., Fac. of Sci., Tokyo Univ., TOKYO, Japan
(no embryological work in progress)

KIORTSIS, V. Dr. ès Sci. — Inst. de Zool. et d'Anat. comp., Univ. de Genève, Rue de Candolle, GENÈVE, Suisse
a. Limb regeneration in the adult and larval animal. *(Urodela)*
b. Influence of the nervous system in tail regeneration (spinal cord and spinal nerves). *Salamandra salamandra (Urodela)*
c. Protein electrophoresis of serum and of regenerating tissues in adults and larvae. *Triturus cristatus, T. alpestris, T. helveticus, Salamandra salamandra (Urodela)*
d. Culture in vitro of regeneration blastema. *(Urodela)*

KIRBY, D. R. S. B.Sc. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England
a. Study of extra-uterine pregnancy. *Mus musculus, Rattus norvegicus (Rodentia)*

KIRRMANN, J.-M. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tétarol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. L'influence protectrice de la cystéamine et de différentes substances chimiques contre l'action tératogène des rayons X.

KISSEN, A. T. — Dept. of Physiol., Ohio State Univ., COLUMBUS 10, Ohio, U.S.A.

KLEIN, N. W. Ph.D. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.
a. Biochemical study of growth and differentiation of explanted embryos. *Gallus* spec. *(Aves)* (in collaboration with H. HERRMANN)

KLEISS, E. Dr.Med., Prof. — Dept. of Anat., Fac. de Ci.Med., Universidad de Los Andes, MÉRIDA, Venezuela
a. Development of the tongue and other organs of the mouth; teratology. *Homo sapiens (Primates)*

KLOFT, W. Dr.rer.nat. — Inst. für Angewandte Zool. der Univ., Naturw. Fak., Röntgenring 10, WÜRZBURG, Deutschland
a. Physiology of development. *(Aphidae, Hemipteroidea)*

KNIGHT-JONES, E. W. B.Sc., D.Phil. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

KNOUFF, R. A. Ph.D., Prof. — Dept. of Anat., Ohio State Univ., COLUMBUS 10, Ohio, U.S.A.

KOCK, J. M. de — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, South Africa

a. Ontogenesis of the chondrocranium. *Melopsittacus undulatus (Psittaci, Aves)*

KOECKE, H.-U. Dr. Phil. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland

a. Krebsproblem als entwicklungsphysiologisches Problem. *Mus* spec. *(Rodentia), Columba* spec. *(Aves)*
b. Probleme der Entwicklungsphysiologie. *Columba* spec. *(Aves)*
c. Neuralleistenentwicklung und Pigmentierung. *Anas* spec. *(Aves)*
d. Identifizierung von Melanoblasten und Melaningenese. *Anas domestica (Aves)*
e. Determination von Neuralleistenzellen und Derivaten. *Anas domestica (Aves)*

KOJIMA-KUNO, M. M.A. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, Japan

a. Physiological studies on the cleavage of eggs. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)*

KOLLROS, J. J. Ph.D., M.I.I.E., Prof. — Dept. of Zool., State Univ. of Iowa, IOWA CITY, Iowa, U.S.A.

a. Influence of peripheral and intracentral factors upon the growth of the central nervous system. *Rana* spec., *Bufo* spec., *Pseudacris* spec. *(Anura)*
b. Metamorphic effects of thyroxine in very low concentrations, and in higher concentrations applied locally. *Rana* spec., *Bufo* spec., *Pseudacris* spec., *Ambystoma* spec. *(Amphibia)*
c. Development of grafts of isolated segments of the central nervous system. *(Anura)*
d. Studies of mitosis in the developing central nervous system. *(Amphibia)*
e. Influence of thyroxine analogues upon metamorphosis. *Rana pipiens (Anura)*
f. Influence of the eyeball upon the development of the lids, cornea, nictitating membrane, palpebral fissure and tear glands. *Rana pipiens, Pseudacris nigrita (Anura)*

KONIGSBERG, I. R. A.B., Ph.D. — Gerontology Section, Baltimore City Hospitals, BALTIMORE 24, Md., U.S.A.

KONIGSBERG, Mrs. U. ROTHFELS Ph.D. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.
(no embryological work in progress)

KONOK, I. Prof. — The Biol. Research Inst. of the Hungarian Acad. of Sci., TIHANY, Lake Balaton, Hungary

a. Comparative physiological and histological studies on the neuro-endocrine activity of the nervous system. The effect of UV-irradiation. *(Insecta; Decapoda)*
b. Studies on the chemical nature and the effect-mechanism of neurosecretion. *(Lepidoptera; Orthoptera; Decapoda)*

KONOPACKA, Mrs. B. Dr., M.V.S.S., Prof. — Inst. of Histol. and Embryol., Veter. Fac., ul. Grochowska 272, WARSZAWA, Poland

a. Histochemical studies on the differentiation of epithelial cells in the intestine. *Sus domestica (Artiodactyla)*

b. Histochemical studies on the developing mesonephros. *Sus domestica (Artiodactyla)*
c. Fosfolipids in differentiating tissues. *Sus domestica (Artiodactyla)*

KOONO, J. Dr. Med. — Anat. Dept., Fac. of Med., Nagasaki Univ., NAGASAKI, Japan
a. Studies on lymph noduli of the intestine in Japanese fetuses (especially their surface area). *Homo sapiens (Primates)*
b. Development of fatty tissue. *Homo sapiens (Primates)*

KOOPS, H. Dipl.-Biol. — Inst. für Fischereibiol. der Univ. Hamburg, Holstenwall 24, HAMBURG 36, Deutschland
a. Entwicklung unter verschiedenen Temperaturbedingungen. *Lota lota (Teleostei)*

KOŚCIELSKI, B. M.Ph. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. Morphogenetical functions and histophysiology of the thyroid gland and hypophysis. *Triturus* spec. *(Urodela)*

KOTANI, M. M.Sc. — Dept. of Biol., Coll. of Sci., Osaka City Univ., Minami-Ogimati, Kita-ku, OSAKA, Japan
a. Differentiation mechanism of primordial germ cells. *(Urodela)*
b. Histochemical studies on the early gonadogenesis. *(Urodela)*

KRABBE, K. H. Dr.Med. — Tornblad-Inst. for comp. Embryol., Biskopsgatan 7, LUND, Sweden (from Kommunehospitalet, COPENHAGEN, Denmark)
— H. C. Ørstedsvej 66, COPENHAGEN V, Denmark

KRAUSE, G. Dr.phil., M.I.I.E., Prof. — Zool. Inst. der Univ. Würzburg, Röntgenring 10, WÜRZBURG, Deutschland
a. Experimentell erzeugte Duplicitas cruciata. *Tachycines asynamorus (Orthoptera)*
b. Analyse der Keimanlagenbildung. *Tachycines asynamorus (Orthoptera)*
c. Embryonalentwicklung. *Notonecta glauca (Hemipteroidea)*

KROEGER, H. Dr.rer.nat. — Zool. Inst. der Eidg. Techn. Hochschule, Universitätsstr. 2, ZÜRICH, Schweiz
a. Developmental metabolism of salivary gland chromosomes. *Drosophila melanogaster (Diptera)*
b. Developmental genetics of pattern formation. *Drosophila melanogaster (Diptera)*

KROPP, B. N. A.M., Ph.D., Prof. — Dept. of Histol. and Embryol., Med. School, Queen's Univ., KINGSTON, Ont., Canada

KRZYSZTOFOWICZ, Miss A. B.Sc. — Zool. Dept. of the Jagiellonian Univ., St. Anne 6, KRAKOW, Poland
a. Descriptive embryology. *(Curculionidae, Coleoptera)*
b. Histochemical studies on development. *Melasoma populi (Coleoptera)* (in collaboration with Cz. JURA and Miss B. WĘGLARSKA)

KUCIAS, J. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. The cytology and cytochemistry of the regenerating tail. *Xenopus laevis (Anura)*

KÜHN, A. Dr.phil.h.c., Dr.rer.nat., Dr.med.h.c., F.I.I.E., Prof. — Max Planck-Inst. für Biol., Spemannstr. 34, TÜBINGEN, Deutschland

a. Entwicklung der Schuppen bei verschiedenen Mutanten und unter experimentellen Bedingungen. *Ephestia* spec., *Ptychopoda* spec. *(Lepidoptera)*
b. Genwirkung und Phaenocopien bei der Ausbildung von Zeichnungsmustern. *Ephestia* spec., *Ptychopoda* spec. *(Lepidoptera)*
c. Chemische Genwirkungen, spez. auf Augenpigmente und Flügelpigmente. *Ephestia* spec., *Plodia* spec., *Ptychopoda* spec. *(Lepidoptera)*

KUHN, O. Dr.rer.nat., Prof. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland
a. Hormonwirkungen in der Morphogenese.
b. Entwicklungsphysiologie der Feder. *(Aves)*
c. Wirkungsweise carcinogener und anderer Substanzen auf tierische Gewebe.
d. Regeneration und Wundheilung.

KUŃSKI, H. M.D. — Inst. of Histol. and Embryol., Acad. of Med., Narutowicza 60, ŁODŹ, Poland
a. Histochemistry of embryonal adrenal glands. *(Mammalia)*

KURIKI, Y. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Nucleic acid metabolism and cell multiplication during early development. *(Echinodermata, Amphibia)* (in collaboration with R. OKAZAKI and Mrs. T. OKAZAKI)
b. Nucleic acid metabolism and cell multiplication in micro-organisms. *(Bacteria)* (in collaboration with R. OKAZAKI and Mrs. T. OKAZAKI)

KUUSI, Miss T. K. Dr.Phil., M.I.I.E. — Zool. Lab., Univ. of Helsinki, P. Rautatiekatu 13, HELSINKI, Finland
a. Study on the process of induction caused by the bone marrow of the guinea-pig, marked with radioactive glycine and methionine. *Triturus* spec. *(Urodela)*
b. Study on the effect of permeability in induction. *Triturus* spec. *(Urodela)*
c. Effect of urea on the inductive capacity of the mesoderm inductor. *Triturus* spec. *(Urodela)*

LAHAYE, Mrs. J. Dr. ès Sci. — Lab. de Biol. Anim., Centre d'Etudes Sup. Sci., Avenue Biarnay, RABAT, Maroc

LALLIER, R. A. Dr. ès Sci. — Inst. de Biol. Physico-Chimique, 13 Rue Pierre Curie, PARIS Ve, France
a. Etude de l'induction. *Triturus taeniatus (Urodela)*
b. Etude de la détermination embryonnaire. *Paracentrotus lividus, Arbacia punctulata (Echinoidea)*

LANDAUER, W. Ph.D., F.I.I.E., Prof. — Dept. of Anim. Genet., Coll. of Agric., Univ. of Connecticut, Storrs Agric. Exper. Stat., STORRS, Conn., U.S.A.
a. Developmental studies on various mutants, such as "duplicate", "creeper" etc. *Gallus domesticus (Aves)*
b. A causal analysis of teratogenic action of insulin and other chemical compounds on developing embryos. *Gallus domesticus (Aves)*
c. Hereditary (lethal) cyclocephaly and cyclopia. *Gallus domesticus (Aves)*
d. The nature and significance of phenocopies. *Gallus domesticus (Aves)*
e. The genetic role of sporadic variations. *Gallus domesticus (Aves)*

LANGMAN, J. M.D., Ph.D., M.I.I.E. — Dept. of Anat., McGill Univ., MONTREAL, Quebec, Canada

a. Immuno-embryological research into lens development. *Gallus domesticus (Aves)*
b. Electrophoretic studies of yolk-sac proteins in relation to the protein configuration of the mother animal. *(Rodentia)*
c. Immuno-embryological research into brain development. *Gallus domesticus (Aves)*

LANZAVECCHIA, G. Dr. Biol. Sci. — Ist. di Zool. e Anat. Comp., Univ. di Milano, Via Celoria 10, MILANO, Italia

LARAMBERGUE, M. de Dr. ès Sci., Prof. — Lab. de Zool., Fac. des Sci., POITIERS, Vienne, France

LA SPINA, Miss R. Ph.D. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Cytochemical investigations on eggs. *(Ascidiae, Urochordata)*

LATIMER, H. B. Ph.D., Prof. (Emer.) — Dept. of Anat., Med. School, Univ. of Kansas, LAWRENCE, Kansas, U.S.A.
a. Study of two races, to determine the variation in relative weights of the various organs and parts in a large and in a small form. *Oryctolagus cuniculus (Lagomorpha)*
b. Quantitative study of the parts of the postnatal heart. *Oryctolagus cuniculus (Lagomorpha)*

LATTA, J. S. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Nebraska, 42nd and Dewey Avenue, OMAHA 5, Nebraska, U.S.A.

LAUFER, H. B.S., M.A., Ph.D. — Dept. of Biol., The Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE 5, Md., U.S.A.
a. Immunochemical study of muscle protein development in the embryo and in the adult limb regenerate. *(Amphibia)*
b. Role of specific blood and tissue proteins in development and during regeneration. *Samia cecropia* and other *Saturniidae (Lepidoptera)*
c. The role of the nerve in limb regeneration. *(Amphibia)*

LAVARACK, J. O. M.B., B.S., Ph.D. — Anat. Dept., Univ. of Melbourne, CARLTON N. 3, Victoria, Australia
a. Histochemical investigation of early neural, notochordal and related tissues. *Gallus gallus (Aves)*

LaVELLE, A. B.S., M.A., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.
a. Reaction patterns of the facial nerve following injury or treatment with drugs during development. *Cricetus auratus (Rodentia)*
b. Development of the neuronal nucleolus and Nissl substance. *Cricetus auratus (Rodentia)*

LAVEN, H. Dr.rer.nat. — Max Planck-Inst. für Biol., Spemannstr. 34, TÜBINGEN, Deutschland

LAZARD (HAUBEN), Mrs. L. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Limb regeneration. *Amblystoma punctatum (Urodela)*

LEBLOND, C. P. M.D., Ph.D., Prof. — Inst. d'Anat., Univ. de Louvain, 38, Rue des Récollets, LOUVAIN, Belgique
a. Development of the thyroid gland. *(Vertebrata)*
b. The development of bones and teeth as shown on radioautographs with the help of radio-carbon-containing substances. *(Vertebrata)*

LEFEBVRES (BOISSELOT), Mrs. J. Dr. ès Sci. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Tératogenèse par carence en vitamines B. *Mus rattus (Rodentia), Felix catus (Carnivora)*
b. Recherches biochimiques sur la tératogenèse. *Mus rattus (Rodentia)*

LEGHISSA, S. Ph.D., Prof. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia
a. Study of neurogenesis.
b. Comparative neurology.
c. Nucleic acids, metabolism and proteins during metamorphosis. *(Anura)*
d. Histogenesis of tectum opticum. *(Aves)*
e. Differentiation of nervous tissue and nucleic acids.
f. Reticulo-endothelial system in the embryo. *Gallus* spec. *(Aves)*
g. Histogenesis of bone tissue. *(Anura)*
h. Histogenesis of the liver *Gallus* spec. *(Aves)*
i. Cellular movements in neurulation. *(Anura)*
k. Nervous activity in the embryonic nervous system. *Gallus* spec. *(Aves)*

LEGRAND, J.-J. Dr. ès Sci., Prof. — Lab. de Zool., Fac. des Sci., POITIERS, Vienne, France

LEHMAN, H. E. M.A., Ph.D. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.

LEHMANN, F. E. Dr.Phil., F.I.I.E., Prof. — Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

LEMEŽ, L. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA II, Czechoslovakia
a. Embryonal haematology. *Gallus domesticus (Aves)*
b. Experimental analysis of the development of blood corpuscles. *Gallus domesticus (Aves)*

LENDER, Th. Prof. — Lab. de Biol. Anim., S.P.C.N., Fac. des Sci. de Paris, Centre d'Orsay, ORSAY (S. & O.), France
a. Problèmes de la régénération: substances inductrices et inhibitrices. *(Planariidae, Turbellaria)*

LENNEP, E. W. van Dr. — Dept. of Histol. and Embryol., Univ. of Sydney, SYDNEY, N.S.W., Australia

LEONE, V. M.D., M.I.I.E. — Ist. di Zool. e Anat. Comp., Univ. di Milano, Via Celoria 10, MILANO, Italia

LERMA, B. de Dr.Sci., Prof. — Ist. di Zool., Univ. di Bari, BARI, Italia

LEROY, P. J. M. Dr. ès Sci. — Lab. d'Histophysiol., Coll. de France, 4 Avenue Gordon Bennett, PARIS 16e, France
a. Développement et physiologie des surrénales. *Gallus* spec., *Anas* spec. *(Aves)*
b. Hybridization végétative. *Gallus domesticus (Aves)*

LEUSSINK, J. A. M.Sc. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland
a. Relations between size and differentiation of inductor and of induced structures in neural induction. *(Urodela)*

LEVAK, Miss B. M.Sc. — Inst. de Biol., Fac. de Méd., Salata, ZAGREB, Yougoslavie

LEVER, J. Dr.Phil., Prof. — Zool. Inst., Free Calvinistic Univ., Rapenburgerstr. 128, AMSTERDAM C., Holland

LEVI, G. L. Dr., F.I.I.E., Prof. (Emer.) — Ist. di Anat. umana, Fac. di Med., Corso Massimo d'Azeglio 52, TORINO, Italia
a. Recherches sur les transformations qui se produisent dans les organismes et dans les tissus cultivés in v i t r o pendant l'accroissement. *(Amniota)*
b. Recherches sur les caractères de la structure et des propriétés biologiques dans les tissus cultivés i n v i t r o. *(Amniota)*

LEVI-MONTALCINI, Miss R. M.D., M.I.I.E. — Dept. of Zool., Washington Univ., Lindell and Skinker Ave., ST LOUIS 5, Mo., U.S.A.

LEWIS, O. J. M.B., Ch.B. — Anat. Dept., Univ. of Melbourne, CARLTON N. 3, Victoria, Australia
a. Development of the renal circulation. *Homo sapiens (Primates)*

LEWIS, W. H. Dr., F.I.I.E., Prof. (Emer.) — Wistar Inst. of Anat. and Biol., PHILADELPHIA 4, Pa., U.S.A.

LI, Mrs. Yu-Ying FU Ph.D. — Biochem. Dept., Howard Hughes Med. Inst., 1800 N.W. 10 Avenue, MIAMI 36, Florida, U.S.A.
a. Thyroid function in the fetus. *Rattus* spec., *Homo sapiens (Mammalia)*
b. Effects of P^{32} and C^{14} on the embryo. *(Orthoptera)*

LIEBER, Miss A. Dr.rer.nat. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutschland
a. Die Glandula thyreoidea im Individualcyklus und ihre Beeinflussung durch Thymectomie. *Sicyases sanguineus (Gobiesocidae, Xenopterygii, Teleostei)*

LIEDKE, Mrs. K. BEYER Ph.D. — Dept. of Biochem., Francis Delafield Hospital, Coll. of Physicians & Surgeons, NEW YORK 32, N.Y., U.S.A.
a. Further studies with purine analogues in development, involving histochemistry and tissue culture. *Rana pipiens (Anura)*

LILLELUND, K. Dr. — Inst. für Fischereibiol. der Univ. Hamburg, Holstenwall 24, HAMBURG 36, Deutschland
a. Entwicklung unter verschiedenen Temperatur- und Salzgehaltsbedingungen. *Osmerus eperlanus (Teleostei)*

LIMBORGH, J. van M.D. — Anat.-Embryol. Lab., State Univ., Janskerkhof 3, UTRECHT, Holland
a. Origin of the asymmetry of the gonads. *Anas boschas (Aves)*
b. Sex differentiation. *Anas boschas (Aves)*

LINDAHL, P. E. Fil.Dr., F.I.I.E., Prof. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden
a. The mechanism of agglutination of spermatozoa. *(Mammalia)* (in collaboration with N. O. BODIN, L. O. THUNQUIST, E. NORDLING, R. BRATTSAND and G. UHLIN)
b. The primary sex rate. *(Mammalia)* (in collaboration with Mrs. G. SUNDELL (THORSELL))
c. Dose-response curves in the action of spermicidals. *(Mammalia)* (in collaboration with K. WEDIN)

LINDBERG, N. O. H. Phil.Dr. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

LINDH, J. Med.lic. — Dept. of Anat., Univ. of Lund, Biskopsgatan 7, LUND, Sweden
a. Prenatal development of the gonads. *Mesocricetus* spec., *Rattus* spec. *(Rodentia)*

LIOTTI, F. S. Dott. — Ist. di Biol. gen., Fac. di Med., S. Pietro, PERUGIA, Italia

a. Sviluppo di meristemi radicali in esperienze di centrifugazione. *Vicia faba (Leguminosae)*
b. Influenza del $CoCl_2$ sulla mortalità da raggi X. *Bufo vulgaris* larvae *(Anura)*

LISON, L. Prof. — Fac. de Méd. de Ribeirão Preto, Univ. de São Paulo, SÃO PAULO, Brésil

LISOWSKI, F. P. L.R.C.P., L.R.C.S.I., L.M. — Dept. of Anat., The Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England
a. Experimental investigation of upright posture and growth. *(Rodentia)*
b. Comparative study of growth of foot. *(Primates)*

LIU, C. N. B.S., Ph.D. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

LÖBBECKE, E.-A. Dr.rer.nat. — Inst. für Entwicklungsphysiologie, Univ. zu Köln, Gyrhofstr. 17. KÖLN-LINDENTHAL, Deutschland
a. Segmentierung des Abdomen bei der Neubildung während der Metamorphose. *Drosophila melanogaster (Diptera)*
b. Segmentierungs- und Determinationsvorgänge der Beinentwicklung. *Drosophila melanogaster (Diptera), Periplaneta americana (Orthoptera)*

LOEWENTHAL, Miss L. A. A.B., A.M., Ph.D., — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich., U.S.A.

LOJDA, Z. MUDr. — Embryolog. ústav lékařské fak. Univ. Karlovy, Albertov 4, PRAHA II, Czechoslovakia
a. Histochemistry in embryology. *Homo sapiens (Primates)*

LONG, W. N. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Determinations of blood, amniotic and intervillous space pressures throughout pregnancy. *Macaca mulatta (Primates)* (in collaboration with Miss E. M. RAMSEY and G. W. CORNER Jr.)

LOPASHOV, G. V. Dr. Biol. Sci., F.I.I.E., Prof. — Inst. of Anim. Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Action of homogenate fractions from different organs and their rudiments, and of some complex milieus on the development of embryonic cells (gastrula, ectoderm, neural plate, eye vesicle). *Rana arvalis, R. temporaria, R. ridibunda, Xenopus laevis (Anura), Ambystoma mexicanum (Urodela)*
b. Introduction of intracellular particles from different organs and their rudiments into embryonic cells (gastrula ectoderm, neural plate). *Rana arvalis, R. temporaria, R. ridibunda, Xenopus laevis (Anura)*
c. Transplantation of nuclei from the stages of ovogenesis to activated eggs and their fragments. *Rana arvalis, R. temporaria, R. ridibunda, Xenopus laevis (Anura), Ambystoma mexicanum, Triturus taeniatus (Urodela), Misgurnus fossilis (Teleostei)*
d. Cultivation of isolated germ cells and cells of early organ rudiments in the eye chamber of larvae growing on different media. *Rana ridibunda, R. arvalis, R. temporaria, Bombina bombina, Xenopus laevis (Anura), Misgurnus fossilis (Teleostei)*

LOS, J. A. Med.Dr. — Anat.-Embryol. Lab. of the Univ. of Leyden, Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Normal and abnormal development of the heart. *Homo sapiens* and other *Animalia* (in collaboration with J. DANKMEIJER)

LOVE, D. S. B.S., M.S. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.
a. Chemistry of muscle differentiation. *Gallus* spec. *(Aves)* (in collaboration with H. HERRMANN)

LOVELACE, Miss L. R. B.S., M.S., Ph.D. — Dept. of Biol., Univ. of South Carolina, COLUMBIA, S.C., U.S.A.

LØVTRUP, S. Dr. Phil. — Dept. of Histol., Univ. of Gothenburg, Medicinaregatan 5, GÖTEBORG, Sweden
a. Mechanism of determination of bilateral symmetry and of gastrulation. *(Amphibia)*

LUBIŃSKA, L. — Nencki Inst. of Exper. Biol., Pasteura 3, WARSZAWA 22, Poland

LUCEY, E. C. A. B.Sc. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland

LÜDTKE, H. Dr., Prof. — Zool. Inst. der Univ., Katharinenstr. 20, FREIBURG i.Brsg., Deutschland
a. Physiology of development. *Carabus* spec. *(Carabidae, Coleoptera)*

LUDWIG, D. A.B., Ph.D. — Biol. Lab., Fordham Univ., NEW YORK 58, N.Y., U.S.A.
a. Effects of substrates and inhibitors on oxygen consumption of homogenates during embryonic development. *Tenebrio molitor, Popillia japonica (Coleoptera)*
b. Study of respiratory enzymes during development. *Tenebrio molitor (Coleoptera)*
c. Effects of parental age. *Tenebrio molitor (Coleoptera)*

LUDWIG, K. S. M.D. — Anat. Inst., Pestalozzistr. 20, BASEL, Schweiz

LUGLI, Miss L. Dr. — Ist. di Zool. e Anat. Comp., Via Università 4, MODENA, Italia

LÜSCHER, M. Dr.Phil., a.o.Prof. — Abt. f. Zoophysiol., Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

LUTHER, W. Dr.Phil., Prof. — Zool. Inst. der Techn. Hochschule, DARMSTADT, Deutschland
a. Regeneration (limb, skin). *(Urodela)*
b. Effects of ionizing radiations on regeneration. Various spp. *(Amphibia), Rattus norvegicus, Mesocricetus auratus (Rodentia)*

LUTZ, H. Dr. ès Sci., M.I.I.E., Prof. — Lab. de Zool., 1 Avenue Vercingétorix, 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. Développement de la glande uro-pygienne. *(Aves)* (en collaboration avec L. GOMOT)
h. Free-martinisme spontané. *(Aves)* (en collaboration avec Mrs. Y. LUTZ (OSTERTAG))

LUTZ (OSTERTAG), Mrs. Y. Dr. ès Sci. — Lab. de Zool., 1 Avenue Vercingétorix, 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. *(Aves)* (en collaboration avec Et. WOLFF)
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)

LYDECKEN, K. M.A., B.M. — Anat. Inst., Univ. of Helsinki, HELSINKI, Finland
a. Development of the anterior pituitary and thyroid gland. *Mus musculus (Rodentia)*

LYNCH, W. F. M.A., M.S., Ph.D., Prof. — Biol. Dept., St. Ambrose Coll., DAVENPORT, Iowa, U.S.A.
a. The inhibitory effects on metamorphosis brought about by thiourea, 2,4-dinitrophenol, sodium azide, potassium-cyanide and glucose. *Bugula* spp. *(Bryozoa)*, *Amaroecium* spec. *(Ascidiae)*
b. The nature of the attaching substance. *Bugula* spp. *(Bryozoa)*

LYNE, A. G. B.Sc., Ph.D. — Div. of Animal Health and Production, C.S.I.R.O., Sheep Biol. Lab., Great Western Highway (P.O. Box 144 Parramatta), PROSPECT, N.S.W., Australia
a. Development of skin and hair. *Trichosurus vulpecula, Perameles nasuta (Marsupialia)*
b. Structure and development of hair follicles and associated glands. *Bos indicus, B. taurus, Ovis* spec. *(Artiodactyla)*

LYNN, W. G. A.B., Ph.D. — The Catholic Univ. of America, WASHINGTON, D.C., U.S.A.
a. Role of the thyroid in direct development. *Eleutherodactylus ricordi (Anura)*
b. Factors in degeneration of the pronephros. *Rana pipiens (Anura)*
c. Effects of goitrogenic drugs upon thermal death point. *Rana sylvatica (Anura)*

LYON, Miss M. F. Ph.D. — Radiobiol. Res. Unit., Atomic Energy Res. Establ., HARWELL, Berkshire, England

LYTLE, C. F. A.B., A.M., Ph.D. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.
a. Growth and morphogenesis. *Craspedacusta sowerbii (Hydroidea)*
b. Division of early embryonic cells. *Rana pipiens (Anura)*

MACFADYEN, A. M.A. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

MACMILLAN, E. W. Dr. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL, England
a. The importance of the epididymis and its vascularization for spermatogenesis. *(Mammalia)*
b. The rate of transport of spermatozoa through the ductus epididymidis. *(Mammalia)*

c. The influence of testosterone propionate on the epididymis. *(Mammalia)*
d. The reaction of the epididymis to vital dyes. *(Mammalia)*

MacRAE, Mrs. E. J. KRUGELIS Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.
a. Porphyrin synthesis in the invertebrates. *Dugesia dorotocephala (Plathelminthes), Eisenia foetida (Annelida)*

MAGGIO, Miss R. Ph.D. — Ist. di Anat. Comp., Via Archirafi 22, PALERMO, Italia
a. Enzymatic activities of mitochondria of the egg. *(Echinoidea)*

MAKINO, S. M.Sc., Ph.D., Prof. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
a. DNA content in treated and non-treated tumor cells. *Rattus norvegicus (Rodentia)*
b. Chromosome analyses in tumor tissues, with special reference to the shift of chromosomes and the arisal of new types of tumors. *Rattus norvegicus (Rodentia)*
c. Chromosome studies in tumors, with special regard to the type and property of tumors. *Homo sapiens (Primates)*

MALAMED, S. M.S., Ph.D. — Dept. of Anat., Albert Einstein Coll. of Med., Eastchester Rd. and Morris Park Ave., NEW YORK 61, N.Y., U.S.A.
a. Mitochondria in fertilization. *(Echinoidea)*

MALAN, Miss M. E. D.Sc. — Zool. Inst., Univ. of Stellenbosch, STELLENBOSCH, South Africa

MANCINO, G. Dr. Biol. Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Development and functionality of the gonads in hybrids. *(Urodela)*

MANCUSO, V. Dr. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. The distribution of enzymes and other substances in the germ during development. *(Evertebrata)*
b. Ultrastructure of some blastomeres in mosaic eggs. *(Evertebrata)*

MANELLI, E. Dr.Nat.Sci. — Ist. di Anat. Comp., Via Belmeloro 8, BOLOGNA (103), Italia

MANGOLD, O. Dr., F.I.I.E., Prof. (Emer.) — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland
a. Einfluss äusserer Faktoren auf die Entwicklung. *(Urodela)*
b. Untersuchungen zur kausalen Morphologie des Kopfes. *(Urodela)*
c. Untersuchungen über den determinierenden Einfluss des Entoderms. *(Urodela)*
d. Spina bifida. *(Urodela)*

MANHOFF, L., Jr. M.D. — Rob't B. Green Hosp., SAN ANTONIO 7, Tex., U.S.A.

MANNER, H. W. B.S., M.S., Ph.D. — Utica Coll. of Syracuse Univ., UTICA, N.Y., U.S.A.
a. Role of cigarette tars in regeneration. *Triturus viridescens virid. (Urodela)*
b. A new embryonic vein (the cloacal vein). *Rana pipiens (Anura)*

MANTON, S. M. F.R.S., M.A., Sc.D. — King's Coll., Strand, LONDON W.C. 2, England

† MARCHAND, J. M. M.Sc., Ph.D., Prof. — Division of Fisheries, Beach Road, Sea Point, CAPE TOWN, South Africa
(deceased)

MARIN, G. Dr. — Ist. di Zool. e Anat. comp., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. Early development and sex differentiation of gonads. *Gallus* spec. *(Aves)*

MARIN (LEWIN), Mrs. L. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Etude du comportement du foie embryonnaire cultivé in vitro. *Gallus gallus (Aves)*

MARKERT, C. L. Ph.D., M.I.I.E., Prof. — Dept. of Biol., The Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE 18, Md., U.S.A.
a. The role of genotype and embryological history in the utilization of specific substrates for melanogenesis. *Mus musculus (Rodentia)*
b. Influence of cell population on melanoblast differentiation. *Mus musculus (Rodentia)*
c. Changes in synthetic ability during cellular differentiation. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
d. Ontogeny of enzymes. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

MARSLAND, D. A. B.Sc., M.S., Ph.D. — Biol. Dept., Washington Square Coll. of Arts and Sci., New York Univ., Washington Square, NEW YORK 3, N.Y., U.S.A.
a. Induction of premature cleavage furrows by centrifugation. *Arbacia punctulata (Echinoidea)*
b. Mechanisms of cell division in marine eggs. *Arbacia punctulata (Echinoidea)*
c. Isolation and characterization of contractile proteins from dividing eggs. *Arbacia lixula (Echinoidea)*

MARTIN, Miss B. A. M.A., Ph.D. — Dept. of Biol., Brooklyn Coll., Bedford Ave. and Ave. H, BROOKLYN 10, N.Y., U.S.A.
a. Cytology and embryology. *(Insecta)*

MARTIN, B. F. M.D., B.Ch., B.Sc. — Dept. of Anat., Fac. of Med., Univ. of Sheffield, SHEFFIELD, England
a. Histochemical studies. *(Mammalia)*

MARTINET, Mrs. M. Dr. ès Sci. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Influence tératogène des intoxications. *Mus rattus (Rodentia)*
b. Influence tératogène de l'hypervitaminose A. *Mus rattus, Mus musculus, Cavia cobaya (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

MASETTI ZANNINI, Miss A. Dr. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
a. Gametogenesis and cytosexual differentiation. *Helix cincta (Pulmonata, Gastropoda)*

MASSART, C. M.D., Prof. — Inst. of Anat. and Histoembryol., Univ. of Pisa, Via Roma 33, PISA, Italy
e. Studies of the development of pharyngeal derivatives. *(Vespertilionidae,* Microchiroptera)

b. Studies on the development of uterus and vagina. *(Vespertilionidae, Microchiroptera)*
c. Developmental morphology of the bursa pharyngea. *(Vespertilionidae, Microchiroptera)*
d. Studies on the developmental morphology of Chiewitz's organ. *(Vespertilionidae, Microchiroptera)*

MASUI, Y. — Biol. Lab., Dept. of Sci., Kônan Univ., Okamoto, KOBE, Japan
a. Influence of LiCl upon the inductive specificity of the organizer. *Triturus* spec., *Hynobius* spec., *Rana* spec., *Bufo* spec. *(Amphibia)*
b. Studies on mesodermal differentiation. *Triturus* spec., *Hynobius* spec., *Rana* spec., *Bufo* spec. *(Amphibia)*

MATĚJKA, M. MUDr., 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,* including *Homo sapiens)*

MATSUMOTO, A. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Electronmicroscopic studies on differentiating tissues. *Triturus pyrrhogaster (Urodela)*

MATSUMOTO, J. M.A. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan
a. Correlation between pigment formation and fluorescent substances during post-embryonal stages. *Carassius auratus (Teleostei)*

MATUSZEWSKI, B. Mgr.phil. — Dept. of Cytol., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a. Oogenesis. *(Cecidomyidae, Diptera)*
b. Cytochemical investigation on the origin of the mitotic spindle. *(Cecidomyidae, Diptera)*

MAWATARI, Sh. D.Sc. — Res. Inst. for Nat. Resources, Hyakunin-cho, 400, Shinjuku, TOKYO, Japan
a. Descriptive embryology, regeneration and metamorphosis. *Anasca* spec., *Ascophora* spec. *(Cheilostomata)*

MAY, R. M. Ph.D., Dr. ès Sci., Dr. en Méd., Prof. — Lab. de Biol. Anim., Pavillon Curie, Univ. de Paris, 12 Rue Cuvier, PARIS Ve, France
a. Brephoplastic transplantation. *Mus musculus (Rodentia)*
b. Tissue culture and embryonic transplantation.

MAYER, G. Dr., Prof. — Lab. d'Histol. et d'Embryol., Fac. de Méd., Univ. de Bordeaux, BORDEAUX, France

MAZIA, D. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Cal., U.S.A.

MAZZI, V. — Inst. of comp. Anat., Via Giovanni Giolitti 34, TORINO, Italy
a. Responses to thiouracil of the hypothalamo-hypophyseal system, hypophysis and thyroid of normal larvae and sugar albino larvae after prevention of adenohypophysis-hypothalamus connections. *Bufo b. bufo (Anura)* (in collaboration with Miss A. GUARDABASSI)

MAZZONI (DE CESARE), Mrs. I. Dr.Nat.Sci. — Ist. di Anat. Comp., Via Belmeloro 8, BOLOGNA (103), Italia

McCAFFERTY, R. E. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Univ. of Kentucky, LEXINGTON, Kentucky, U.S.A.

a. Movement and development of the embryo and fetus following experimentally induced changes of amniotic fluid pressure. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Effect of maternally administered Coxsackie virus on embryonic resorption and malformation. *Mus musculus (Rodentia)*

McCALLION, D. J. B.A., M.A., Ph.D., Prof. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada
a. The development of neural differentiation tendencies in the neurectoderm of the chick embryo just in front of the primitive node with special emphasis upon their regional character. *Gallus domesticus (Aves)*
b. Specific inhibition of differentiation in embryonic organs by extracts of homogenates of homologous adult organs. *Gallus domesticus (Aves)*

McKAY, D. G. B.S., M.D. — Dept. of Pathol., Harvard Univ., Med. School, 25 Shattuck St., BOSTON 15, Mass. U.S.A.
— Boston Lying-in Hospital, 221 Longwood Ave., BOSTON 15, Mass.
— Free Hospital for Women, 245 Pond Ave., BROOKLINE, Mass.
a. Histochemical studies on developing embryos. *Homo sapiens (Primates)* (in collaboration with A. T. HERTIG and Miss E. C. ADAMS)
b. Histochemical studies on abnormal trophoblast with special reference to hydatidiform mole and chorinepithelioma. *Homo sapiens (Primates)* (in collaboration with A. T. HERTIG, K. BENIRSCHKE and Miss E. C. ADAMS)

McKEEHAN, M. S. M.S., Ph.D. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.
a. Problems of growth and differentiation as studied in the developing lens. *Gallus domesticus (Aves)*

McKENZIE, J. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. The metabolic characteristics of the heart-forming areas of the early embryo. *Gallus gallus (Aves)* (in collaboration with J. D. EBERT)

McKINNELL, R. G. Dr. — Inst. for Cancer Research, 7701 Burholme Avenue, PHILADELPHIA 11, Pa., U.S.A.
a. Transplantation of tumor (Lucké renal adenocarcinoma) nuclei into enucleated eggs. *Rana pipiens (Anura)* (in collaboration with Th. J. KING)

McLAREN, Miss A. M.A., D.Phil. — Inst. of Animal Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland
a. Influence of pre-natal environment upon development, investigated by transfer of fertilized eggs. *Mus musculus (Rodentia)*
b. Induction of super-fecundity by hormone treatment. *Mus musculus (Rodentia)*
c. Intervarietal grafting. *Solanum* spec. *(Solanaceae)*
d. Influence of early embryonic environment upon later development, investigated by i n v i t r o cultivation of early embryos. *Mus musculus (Rodentia)*

McMINN, R. M. H. M.D., Ch.B., Ph.D. — Dept. of Anat., Fac. of Med., Univ. of Sheffield, SHEFFIELD, England
a. Epithelial regeneration in various organs. *(Mammalia)*

McNUTT, C. W. A.B., M.S., Ph.D. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.
a. Analysis of morphological effects of the short ear gene. *Mus musculus (Rodentia)*

b. A study of the dwarf gene in association with other genes. *Mus musculus (Rodentia)*

MECKLENBURG, C. L. F. C. von Fil.mag. — Embryol. Dept., Zool. Inst. of the Univ. of Lund, LUND, Sweden

a. The development of the saccus vasculosus. *(Teleostei)*

MEDAWAR, P. B. M.A., D.Phil., F.R.S., Prof. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C. 1, England

MELLINGER, J. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France

a. Génèse, différenciation et rôle des sacs vasculairs, étude expérimentale. *(Pisces)*

MENDONÇA, H. Prof. — Cadeira de Histol. e Embriol., Fac. de Medicina, Univ. do Recife, Caixa Postal N. 616, RECIFE, Brasil
(no embryological work in progress)

MENKES, B. Dr.med., Prof. — Academia Republicii Populare Romîne, Baza de cercetări stiințifice Timișoara, Bul. Mihai Viteazul 24, TIMIȘOARA, Roumanie

a. Embryonale Heterotransplantationen. Melanogenese. *Gallus domesticus (Aves)*
b. Regeneration im Zentralnervensystem. *Gallus domesticus (Aves)*
c. Elektrophoretische Analyse der Entwicklungsprozesse. *Gallus domesticus (Aves)*
d. Entwicklung der Reaktivität beim Embryo. *Gallus domesticus (Aves)*
e. Transplantation von malignen Tumoren in Embryonen. *Gallus domesticus (Aves)*
f. Studien an embryonalen heterostadialen Transplantaten. *Gallus domesticus (Aves)*

MENSCHIK, Z. B.A., M.D., D.Sc., L.M.C.C., Prof. — Dept. of Anat., School of Med., Georgetown Univ., 3900 Reservoir Road, N.W., WASHINGTON 7, D.C., U.S.A.

a. Dietary factors in development. *Mus musculus (Rodentia)*
b. Deficiency of vitamin E and essential unsaturated fatty acids in the development of the central nervous system. *Mus musculus (Rodentia)*

MERCIER (PAROT), Mrs. L. Dr. ès Sci. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Tératogenèse par bleu trypan, sulfamides hypoglycémiants, antimetabolites. *Rattus* spec. *(Rodentia)*
b. Influence de la cortisone sur la gestation et le développement foetal. *Rattus* spec. *(Rodentia)*

MERKLE, U. Dr.Med. — Anat. Inst. der Univ., TÜBINGEN, Deutschland

a. Spermatogenese und Sertoli-Zellen. *Rattus* spec. *(Rodentia)*

METTETAL, C. Dr. ès Sci. — Lab. de Biol. Anim., Centre d'Etudes Sup. Sci., Avenue Biarnay, RABAT, Maroc

METZ, C. B. Ph.D., M.I.I.E. — Oceanographic Inst., Florida State Univ., TALLAHASSEE, Florida, U.S.A.

a. Antigens of the sperm surface. *Arbacia* spec. *(Echinoidea)*
b. Release of S^{35} from labelled fertilizin by sperm. *Arbacia* spec. *(Echinoidea)* (in collaboration with R. HATHAWAY)

c. Mode of action of certain fertilization inhibitors. *Arbacia* spec. *(Echinoidea)*

MEURLING, P. B. Fil.mag. — Embryol. Dept., Zool. Inst. of the Univ. of Lund, LUND, Sweden
a. The development of the pituitary. *(Elasmobranchia)*

MEYER, D. B. Ph.D. — Dept. of Anat., Coll. of Med., Wayne State Univ., DETROIT 7, Mich., U.S.A.
a. Morphogenesis and developmental histochemistry of embryonic eye. *Gallus domesticus (Aves)* (in collaboration with R. O'RAHILLY)

MEYLING, H. A. D.V.M., Prof. — Veter. Anat. and Embryol. Inst., Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Holland
a. Malformations of the heart. *Sus scrofa (Artiodactyla)*
b. Cyclopia. Different domestic Animals

MIALE, Miss I. A.B., Ph.D. — Lab. of Neuroanat. Sci., NINDB, Nat. Inst. of Health, BETHESDA, Md., U.S.A.
a. Histochemistry of brain in development.

MICHAEL, M. I. B.Sc., M.Sc., Ph.D. — Dept. of Zool., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt
a. The development of the nasal capsules. *Bufo regularis (Anura)* (in collaboration with S. N. SEDRA)
b. Stages in normal development. *Bufo regularis (Anura)* (in collaboration with S. N. SEDRA)

MICHAŁOWSKI, J. Mgr. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Sex determination and its abnormalities. *Xenopus laevis (Anura)*
b. Hermaphroditism. *(Amphibia)*

MICHIE, D. M.A., D.Phil. — Dept. of Surgical Sci., Univ. New Buildings, Teviot Place, EDINBURGH 8, Scotland

MIETE, M. Physician — Anat.-Embryol. Lab. of the Univ., Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Development of the stomach. *Homo sapiens (Primates)* (in collaboration with J. DANKMEIJER)

MIFUNE, S. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Inductive action of fresh mouse tissues and the modification of it by various methods. *(Amphibia; Mammalia)*
b. Nature of protein responsible for induction. *(Amphibia; Mammalia)*

MILAIRE, J. M.D. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Univ., 97 Rue aux Laines, BRUXELLES, Belgique
a. Cytochemistry of limb buds. *(Vertebrata)*
b. Chemical predifferentiation of some anlagen during head development (otic vesicle, chondrocranium, eye muscles). *Mus norvegicus (Rodentia)*
c. Cytochemistry of cephalogenesis and of limb buds. *Talpa* spec. *(Insectivora)*

MILIN, R. Prof. — Inst. d'Histol. et d'Embryol., Fac. de Méd., SARAJEVO, Yougoslavie
(no embryological work in progress)

MILLARD (BOKENHAM), Mrs. N. A. H. Ph.D. — Dept. of Zool., Univ. of Cape Town, Rondebosch, CAPE TOWN, South Africa
(no embryological work in progress)

MILLEN, J. W. M.A., M.D., D.Sc. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England
a. Experimental teratology. *(Mammalia)*

MILLER, J. A., Jr. A.B., Ph.D. — Dept. of Anat., Emory Univ., ATLANTA 22, Ga., U.S.A.
a. Nutritive substances and reconstitution. *Tubularia* spec. *(Hydroidea)*
b. Hypothermia and resuscitation from asphyxia neonatorum. *Cavia* spec., *Canis* spec. *Homo sapiens (Mammalia)* (in collaboration with Mrs. F. MILLER (STONE))

MILLER (STONE), Mrs. F. B.A., Ph.D. — Dept. of Anat., Emory Univ., ATLANTA 22, Ga., U.S.A.
a. Hypothermia and resuscitation from asphyxia neonatorum. *Cavia* spec., *Canis* spec. *(Mammalia)* (in collaboration with J. A. MILLER, Jr.)

MINA, E. Y. M.B., Ch.B., D.A., M.D. — Dept. of Anat., Fac. of Med., ALEXANDRIA, Egypt
a. A study of the competence of the prechordal part of the neural plate (or tube) for neural crest formation under conditions of explantation at different stages of development. *(Amphibia)*
b. Regeneration of the optic vesicle. *(Amphibia)*

MINGANTI, A. Dr., M.I.I.E. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Development and cytology of hybrids. *(Ascidiae, Urochordata)*
b. Chemical and physiological investigations on the jelly. *(Amphibia)*
c. Androgenetic hybrids. *(Ascidiae, Urochordata)*

MINTZ, Miss B. A.B., M.S., Ph.D., M.I.I.E. — Whitman Lab., Univ. of Chicago, 5700 S. Ingleside, CHICAGO 37, Ill., U.S.A.
a. Origin, migration and development of germ cells in normal, mutant and irradiated embryos. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Developmental interactions between normal and mutant cells. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

MIROLLI, M. — Ist. Italiano di Idrobiologia, PALLANZA (Novara), Italia (no embryological work in progress)

MITCHISON, J. M. M.A., Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland
a. Growth of single cells. *Schizosaccharomyces pombe, Saccharomyces cerevisiae (Saccharomycetes)*

MITCHISON, N. A. M.A., D.Phil. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland
a. Transplantation into chicken eggs of turkey haemopoietic and lymphoid elements. *Gallus gallus, Meleagris gallipavo (Galliformes, Aves)*

MIYA, K. Dr. Sc. — Inst. of Applied Entomol., Fac. of Agr., Iwate Univ., MORIOKA, Japan
a. Embryonic development of gonads. *Bombyx mori (Lepidoptera)*
b. Electron microscope study of embryonic development. *Bombyx mori (Lepidoptera)*

MIYAMORI (YAMAMOTO), Mrs. H. M.Sc. — Dept. of Biol., Coll. of Sci., Osaka City Univ., Minami-Ogimati, Kita-ku, OSAKA, Japan
a. Hormonal influence on sex differentiation. *(Amphibia)*

MOFFETT, B. C., Jr. A.B., Ph.D. — Dept. of Anat., Schools of Med. and Dent., Univ. of Alabama Med. Center, 620 South 20th St., BIRMINGHAM 5, Alabama, U.S.A.

MOHRI, H. B.Sc., M.A. — Biol. Inst., Coll. of Gener. Education, Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan
- a. Metabolism of gametes. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus, Anthocidaris crassispina (Regularia, Echinoidea)*

MOHSEN, Th. Dr. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France — Université de Dakkar, DAKKAR, French Western Africa
- a. Morphogénèse des gonades et du tractus génital. *(Selachii; Teleostei)* (en collaboration avec J. H. VIVIEN et J. J. THIEBOLD)

MOLL, J. M.D., Ph.D. — Dept. of Anat. and Embryol., State Univ., Oostersingel 69, GRONINGEN, Holland
(no embryological work in progress)

MOMENT, G. B. A.B., Ph.D., — Goucher College, BALTIMORE 4, Md., U.S.A.
- a. Relationship of method of healing and of the nervous system including neurosecretory tissue to posterior regeneration. *Eisenia foetida (Oligochaeta)*
- b. Influence of mass of tissue on growth. *Ambystoma punctatum (Urodela)*
- c. Influence of radiation on amount of regeneration. *Eisenia foetida (Oligochaeta)*

MONESI, V. M.D. — Lab. del Sincrotrone, Divis. Biol. del C.N.R.N., FRASCATI (Roma), Italia
- a. Development in vitro of embryonic organs.

MONNÉ, L. Phil.Dr. — Statens Veterinärmedic. Anstalt, Dept. of Parasitol., STOCKHOLM 50, Sweden
- a. Life cycles and developmental physiology of parasitic worms. *(Nematoda)*

MONROY, A. M.D., F.I.I.E., Prof. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia
- a. Studies on the mitochondria of the egg during early development. *Paracentrotus lividus (Echinoidea)*

MOOG, Miss F. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Washington Univ., Lindell and Skinker Ave., ST LOUIS 5, Mo., 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)*

MOOKERJEE, S. M.Sc., Ph.D., F.R.M.S. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
- a. Determination and individuation. *Hydra* spec. *(Coelenterata)* (in collaboration with S. SANYAL, S. N. NAGARAJAN and A. K. SINHA)
- b. Physiology of cell-contact. *(Porifera)* (in collaboration with B. GANGULY and Miss M. CHOWDHURY)
- c. Effects of cell free proteins on differentiation. *Gallus gallus (Aves)* (in collaboration with S. ADHIKARI, Miss B. NURJEHAN and S. GHOSAL)
- d. Nucleo-cytoplasmic relation. *Amoeba* spec. *(Protozoa)* (in collaboration with L. WAIDYASEKARA, Mrs. M. G. ALAMELU, Miss D. MUKHERJI and J. DUTTA)

MOORE, A. R. Ph.D., Prof. — Hopkins Marine Station, PACIFIC GROVE, Cal., U.S.A.

a. On the structure of the pluteus. *Allocentrotus fragilis (Echinoidea)*
b. Hybridization. *(Centroidea, Echinoidea)*
c. Teratology of plutei. *(Centroidea, Echinoidea)*

MOORE, Mrs. B. CLARK A.B., A.M., Ph.D. — Dept. of Zool., Columbia Univ., Broadway and 116th St., NEW YORK 27, N.Y., U.S.A.
a. Further studies of nucleo-proteins in development. Photometric analysis of nuclear proteins in lethal diploid and androgenetic hybrid embryos. *Rana pipiens, R. sylvatica (Anura)*
b. A comparison of the DNA content per nucleus in different species. *(Anura)*
c. H^3-thymitine incorporation in lethal diploid and androgenetic hybrid embryos. *Rana pipiens, R. sylvatica (Anura)*

MOORE, J. A. A.B., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Columbia Univ., Broadway and 116th St., NEW YORK 27, N.Y., U.S.A.
a. Transplantation of nuclei. *(Anura)*
b. Embryology. Australian spp. *(Anura)*
c. Gastrula ectoderm competence and dorsal lip potency in hybrid embryos tested by xenoplastic and heteroplastic transplantations to diploid hosts. *Rana pipiens* ♀ x *Rana clamitans* ♂ *(Anura)*

MORGAN, Miss J. A. B.Sc. — Dept. of Zool., Univ. of New England, ARMIDALE, N.S.W., Australia
a. Regeneration and metamorphosis of cerci. *Blattella germanica (Dictyoptera, Insecta)* (in collaboration with A. STOCK and A. F. O'FARRELL)

MORI, H. M.A., Dr.Agri., Prof. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan
a. Insecticide action on eggs, larvae and adults. *(Insecta)*

MORI, Y. M.A., Prof. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan
a. On the cause of disappearance of cutaneous melanophores of young animals. *Carassius auratus (Teleostei)* cies. *(Pisces)*
b. Morphological and chemical studies of pigment formation in various spe-

MORICARD, R. Dr. en Méd., Dr. ès Sci. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, Hopital Broca, 111, Rue L. M. Nordmann, PARIS XIII, France
a. Physiologie de la maturation ovulaire et structure de la membrane pellucide de l'ovule observées en microscopie électronique. *(Mammalia)* (en collaboration avec N. GUILLAUD)
b. Métabolisme du ^{35}S dans la physiologie de la reproduction. *(Mammalia)* (en collaboration avec Miss M. M. C. S. GOTHIÉ et Mrs. M. RODRIGUEZ (GALINDO))
c. Equilibres hormonaux modifiant le métabolisme du ^{35}S dans la secrétion cervicale. *(Mammalia)* (en collaboration avec Mrs. M. RODRIGUEZ (GALINDO))
d. Utilisation des techniques de microscopie électronique dans l'étude de l'ovogénèse. *(Mammalia)* (en collaboration avec Mrs. N. HINGLAIS (GUILLAUD) et R. CARTIER)
e. Cytopathologie de la méiose dans les stérilités masculines et recherches sur certaines fonctions spermatiques au moyen des traceurs (^{32}P et ^{35}S). *(Mammalia)* (en collaboration avec Miss M. M. C. S. GOTHIÉ et N. GUILLON)

MORRILL, J. B. A.B., M.S., Ph.D. — Shanklin Lab. of Biol., Wesleyan Univ., MIDDLETOWN, Conn., U.S.A.
a. Effects of metal ions on development. *Lymnaea stagnalis, L. palustris (Gastropoda)*

MORRIS, I. G. B.Sc., Ph.D. — Agr. Res. Council Unit of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Wales
a. Immunological relations of mother and young. *(Mammalia)*

MOSCONA, A. A. M.Sc., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Chicago, CHICAGO 37, Ill., U.S.A.
a. Mechanisms and patterns of tissue dissociation and cell aggregation. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*
b. Morphogenetic interactions of cells in vitro. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*
c. Developmental properties of extraembryonic membranes. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

MOSSMAN, H. W. B.S., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON 6, Wis., U.S.A.
a. Comparative morphology of the fetal membranes and reproductive tracts. *(Mammalia)*

MOSZKOWSKA, Mrs. A. Dr. ès Sci. — Lab. d'Histophysiol., Coll. de France, 4 Avenue Gordon Bennett, PARIS 16e, France
a. Culture d'organes embryonnaires (gonades, hypophyse, épiphyse). *(Aves)*
b. Culture combinée de l'hypothalamus et de l'hypophyse embryonnaire. *Gallus domesticus (Aves)*

MOTOMURA, I. Dr.Sc., M.I.I.E., Prof. — Lab. of Embryol., Inst. of Biol., Tohoku Univ., SENDAI, Japan

MUCHMORE, W. B. Ph.D. — temporary: Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Development of contractile proteins. *(Amphibia)*

MUIR, A. R. M.B., Ch.B., M.D. — Dept. of Anat., Univ. of Edinburgh, Univ. New Buildings, Teviot Row, EDINBURGH 8, Scotland
a. Development of myocardium with special reference to the conducting tissue. *Rattus domesticus (Rodentia)*
b. Electron microscope studies of differentiating mesoderm with special reference to muscular and haemopoetic tissues. *Rattus domesticus (Rodentia)*

MUKHERJI, Miss D. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
a. Cellular changes after centrifugation. *Amoeba* spec. *(Protozoa)*
b. Nucleo-cytoplasmic relationship. *Amoeba* spec. *(Protozoa)* (in collaboration with S. MOOKERJEE, L. WAIDYASEKARA, Mrs. M. ALAMELU and J. DUTTA)

MULHERKAR, Miss L. Ph.D., M.Sc. — Zool. Dept., Univ. of Poona, POONA, India

MULLIGAN, W. J. M.D. — Free Hospital for Women, 245 Pond Ave., BROOKLINE, Mass., U.S.A.
a. Histochemical observations on early fertilized ova of less than 14 days age. *Homo sapiens (Primates)* (in collaboration with A. T. HERTIG, J. ROCK and Miss E. C. ADAMS)

MULNARD, J. O. M.D., M.I.I.E. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Univ., 97 Rue aux Laines, BRUXELLES, Belgique

a. Appearance of enzymes, mainly alcaline phosphatase, in development. *(Rodentia)*
b. Metachromasia in vivo in the developing egg, and cytochemical analysis of cytoplasmic granulations in relation to metachromasia. *Chaetopterus* spec. *(Polychaeta)*, *Arbacia* spec. *(Echinoidea)*
c. Experimental analysis of development by embryonic tissue culture. *(Rodentia)*

MURAKAMI, U. M.D., D. Med. Sci. — Research Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan

a. Study on the manifestation of common pathological changes observed in early stages of developing malformations of the central nervous system. *Mus musculus (Rodentia)* (in collaboration with Y. KAMEYAMA)
b. Effects of ionizing radiation upon the embryo. *Mus musculus (Rodentia)* (in collaboration with Y. KAMEYAMA)

MURATORI, G. Dr.Med., o.Prof. — Ist. Anat., Univ. di Ferrara, Via Fossato di Mortara 66, FERRARA, Italia

a. Micromanipulation of the germ cells of the embryo. *Gallus domesticus (Aves)*
b. Development of the carotid and subclavian paraganglia.

MURRAY, P. D. F. B.Sc., M.A., D.Sc., F.I.I.E., Prof. — Dept. of Zool., Univ. of Sydney, SYDNEY, N.S.W., Australia

a Development of secondary cartilage on membrane bones. *Gallus domesticus (Aves)*

NACE, G. W. A.B., M.A., Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich., U.S.A.

a. Serological and electrophoretic study of proteins of the embryo. *Rana pipiens (Anura)*
b. Study of development in the presence of antibodies against embryonic proteins. *Rana pipiens (Anura)*
c. Immuno-histologic analysis of development using fluorescent antibody. *Rana pipiens (Anura)*

NADAMITSU, S. B.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan

a. In vitro ovulation. *Mus bactrianus (Rodentia)*

NAGARAJAN, S. N. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Cytological basis of differentiation. *Hydra* spec. *(Coelenterata)*
b. Determination and individuation. *Hydra* spec. *(Coelenterata)* (in collaboration with S. MOOKERJEE, S. SANYAL and A. K. SINHA)

NAKAMURA, I. M.D. — Dept. of Anat., Tokyo Med. & Dental Univ., Yushima 3, Bunkyo-ku, TOKYO, Japan

a. Analysis of prospective areas and differentiation potencies in the epiblast of the blastoderm. *Gallus domesticus (Aves)*

NAKAMURA, O. D.Sc., M.I.I.E., Prof. — Lab. of Morphol., Osaka Lib. Arts Univ., IKEDA, Osaka-Pref., Japan

a. Map of presumptive regions and formative movements. *Triturus* spec., *Hynobius* spec., *Rana* spec. *(Amphibia)*
b. Experimental analysis of development of tail. *Triturus* spec. *(Urodela)*
c. Formation of digestive tract. *Rana* spec., *Triturus* spec. *(Amphibia)*

d. Interaction of germ layers in differentiation and shaping. *Triturus* spec., *Rana* spec. *(Amphibia)*

NAKANE, T. M.Sc. — Biol. Lab., Kyoto Prefectural Univ., Shimogamo, KYOTO, Japan
(no embryological work in progress)

NAKANO, E. M.A., Dr.Sci., M.I.I.E. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Physiological studies on fertilization and development. *Hemicentrotus pulcherrimus (Echinoidea), Oryzias latipes (Teleostei)*
b. Metabolic analysis of early development. *Oryzias latipes (Teleostei)* (in collaboration with T. HISHIDA)

NAKAYAMA, T. M.B., M.D. — Anat. Inst., Med. Fac., Nihon Univ., No. 30, Ooyaguchi-kamimachi, Itabashi-ku, TOKYO, Japan
a. Embryological studies on the venae cordis minimae. *Homo sapiens (Primates)*
b. On the developmental changes of visceral forms. *Mus musculus (Rodentia)*

NARBAITZ, R. M.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Induced aspermatogenesis. *Cavia porcellus (Rodentia)*

NAYLOR, E. B.Sc., Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

NEDVÍDEK, J. Dr. — Dept. of Gener. and Exper. Zool., Zool. Inst. of Charles Univ., Viničná 7, PRAHA II, Czechoslovakia
a. Nucleic acids and subcellular particles in early development. *(Amphibia)*
b. Transplantation of nuclei and cytoplasmic components. *(Amphibia)* (in collaboration with F. SLÁDEČEK and A. ROMANOVSKÝ)

NEEDHAM, A. E. M.A., D.Sc. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England
a. Nitrogen excretion during wound-healing and regeneration. *Lumbricus terrestris, Eisenia foetida, Allolobophora caliginosa (Oligochaeta)*

NEEDHAM, J. Dr., F.R.S., F.I.I.E., Prof. — Gonville & Caius Coll., CAMBRIDGE, England

NEF, W. — Abt. f. Genet., Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

NEW, D. A. T. M.A., Ph.D. — Dept. of Zool., Univ. Coll. of the West Indies, KINGSTON 7, Jamaica
a. Blastoderm expansion. *Gallus domesticus (Aves)*
b. Tail regeneration. *Sphaerodactylus argus (Lacertilia)*

NEWTH, D. R. B.Sc., Ph.D., M.I.I.E. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C. 1, England
a. Regeneration of defective organs. *(Amphibia)*
b. Morphogenetic effects of homologous DNA administered to eggs and embryos. *Siredon mexicanum, Xenopus* spp. *(Amphibia)*

NICHOLAS, J. S. Ph.D., F.I.I.E., Prof. — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.
a. Studies on the egg. *Mus norvegicus (Rodentia)*
b. Determination times of tissues and organs. *Mus norvegicus (Rodentia)*
c. Factors underlying embryonic form.
d. Development of nucleic acids in embryos. *(Amphibia), Mus norvegicus (Rodentia)*

e. Development of acidphosphatase. *(Amphibia), Mus norvegicus (Rodentia)*
f. Centrifugation and transplantation of eggs. *Mus norvegicus (Rodentia)*
g. Culture of eggs and embryos. *Mus norvegicus (Rodentia)*
h. Heteroplastic grafting. *Gallus gallus (Aves)* (host), *Mus norvegicus (Rodentia)* (donor)
j. Coelomic studies of differentiation. *Mus norvegicus (Rodentia)*
k. Study of the forces engaged in cleavage.

NIESSING, K. Dr.Med., o.Prof. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutschland
(no embryological work in progress)

NIEUWENHUYS, R. — Netherlands Central Inst. for Brain Research, Mauritskade 59B, AMSTERDAM O., Holland
a. Ontogenesis of the cerebrum. *(Teleostei)*

NIEUWKOOP, P. D. Phil.Dr., F.I.I.E., Prof. — Hubrecht Lab., Intern. Embryol. Inst., Janskerkhof 2, UTRECHT, Holland
a. Analysis of the neural competence of the ectoderm with various techniques. *Ambystoma mexicanum (Urodela)*
b. Qualitative and quantitative analysis of the propagation of inductive actions through competent ectoderm, a.o. with time lapse micro-photography. *Ambystoma mexicanum (Urodela)*

NIIZIMA, M. M.D., Ph.D. — Dept. of Anat., Tokyo Med. & Dental Univ., Yushima 3, Bunkyo-ku, TOKYO, Japan
a. Tissue culture studies on metamorphosis. *Rana catesbiana (Anura)*
b. Tissue culture studies on the development and differentiation of dental tissues. *Rattus norvegicus albus, Homo sapies, Felis domestica (Mammalia)*
c. Tissue culture studies on the functional morphology of the hepatic cells. *Gallus domesticus (Aves), Homo sapiens (Primates)*

NIJENHUIS, E. D. M.Sc. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland
a. Analysis of the phase specificity in the sensitivity of the egg to Li-ions. *Limnaea stagnalis (Gastropoda)*
b. Autoradiographic localization of kations in eggs. *Limnaea stagnalis (Gastropoda)*
c. Time course of mitotic processes during early cleavage stages. *Limnaea stagnalis (Gastropoda)*
d. Influence of lithium on mitosis and cleavage. *Limnaea stagnalis (Gastropoda)* (in collaboration with W. L. M. GEILENKIRCHEN and Chr. P. RAVEN)

NISHIITSUTSUJI (UWO), Mrs. J. — Lab. of Embryol. and Exper. Morphol., Zool. Inst., Dept. of Sci., Kyoto Univ., KYOTO, Japan
a. Hormonal mechanism of metamorphosis. *Bombyx mori, Luehdorfia japonica, Philosamia cynthia ricini (Lepidoptera)* (in collaboration with M. ICHIKAWA)

NISHIMURA, H. M.D. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO, Japan
a. Experimental teratology. *Mus musculus, Meriones unguiculatus (Rodentia)*

NISSEN, Th. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz

a. Elektronenmikroskopische Untersuchungen des melanoblastischen Pigments in der Feder des normalen und albinotischen Tieres. *Melopsittacus undulatus (Aves)*

NIU, M. C. Ph.D., M.I.I.E. — Rockefeller Inst. for Med. Research, 66th St. and York Ave., NEW YORK 21, N.Y., U.S.A.

a. In vitro study of protein formation during embryonic differentiation. Various spp. *(Urodela)*

NOBILI, R. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia

a. Reproduction. *(Tricladidea, Turbellaria)*

NONAKA, T. B.M., M.D. — Inst. of Endocrinol., Gunma Univ., Iwagamicho, MAEBASHI, Japan

a. Experiments on metamorphosis. *Bufo vulgaris formosus, Rana japonica (Anura)*

b. Micro-spectro-photometrical studies of primordial thyroid and hypophysis. *Bufo vulgaris formosus, Rana catesbiana (Anura)*

NORBERG, O. V. O.Dr., Prof. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden

a. A study of teeth and jaws during the first years of life. *Homo sapiens (Primates)*

NORDLING, E. G. V. Fil.mag. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

a. The mechanism of agglutination of spermatozoa. *(Mammalia)* (in collaboration with P. E. LINDAHL, N.-O. BODIN, L. O. THUNQVIST, R. L. BRATTSAND and G. UHLIN)

NORMAN, C. Ph.D. — Dept. of Biol., W. Virginia Univ., MORGANTOWN, W.Va., 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)*

NOVÁK, V. J. A. D.S. — Biol. Inst. of the Czechoslovak Acad. of Sci., Na cvičišti čislo 2, PRAHA 6, Czechoslovakia

a. The function of the hormones of metamorphosis. *Bombyx mori (Lepidoptera), Pyrrhocoris apterus (Heteroptera)*

NOWAK, A. Lek.med. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland

(no embryological work in progress)

NOWAKÓWNA, Miss J. M.Ph. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland

a. The morphogenetical functions of the thyroid gland and hypophysis. *(Amphibia, Reptilia, Aves)*

b. Pigmentation and the endocrine glands. *(Amphibia)*

NÜESCH, H. D.Sc., Prof. — Zool. Anstalt der Univ., Rheinsprung 9, BASEL, Schweiz

a. Einfluss des Nervensystems auf die Entwicklung anderer Organe. *Telea polyphemus (Saturniidae, Lepidoptera)*

b. Entwicklung der imaginalen Muskeln. *(Neuroptera, Lepidoptera)*

c. Entwicklung des Nervensystems. *(Insecta)*

NUMANOI, H. Ph.D. — Biol. Inst., Coll. of Gener. Education, Univ. of Tokyo, 865 Komaba-cho, Meguro-ku, TOKYO, Japan
a. Biochemical study of fertilization substances, with special reference to the physiology of polyphenol sulfate and choline derivatives. *(Echinoidea)*

NURJEHAN, Miss B. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
a. Mitotic counts in organ rudiments. *Gallus gallus (Aves)*
b. Effects of cell free proteins on differentiation. *Gallus gallus (Aves)* (in collaboration with S. MOOKERJEE, S. ADHIKARI and S. GHOSAL)

NYHOLM, K. G. Fil.Dr. — Zootom. Inst., Stockholms Högskola, STOCKHOLM, Sweden
a. Study of the development. *(Echinoderidae, Aschelminthes)*
b. Study of the life-history. *(Rhizopoda monothalamia)*

OBIKA, M. M.A. — Biol. Lab., Keio Univ., YOKOHAMA, Hiyoshi, Japan
a. Correlation between pigment formation and pterin derivatives during development. *(Amphibia)*

O'BRIEN, B. R. A. B.Sc., Ph.D. — Dept. of Embryol. and Histol., Univ. of Sydney, SYDNEY, N.S.W., Australia
a. Haemoglobin synthesis and γ-Azoguanine inhibition. *Gallus domesticus (Aves)*

O'BRIEN, J. P. Ph.D. — Dept. of Biol., Marquette Univ., 1217 West Wisconsin Ave., MILWAUKEE 3, Wis., U.S.A.
a. Regression of larval and adult limb and tail following exposure to X-rays or denervation. *Triturus viridescens, Ambystoma punctatum (Urodela)*
b. Spindle-cell sarcoma of adult animals. *Triturus viridescens, Ambystoma punctatum (Urodela)*
c. Radiosensitivity in relation to temperature prevailing during exposure. *Rana catesbiana, R. pipiens, Triturus viridescens (Amphibia), Mus rattus, Lepus americanus (Rodentia)*
e. Irradiation of solely the circulating blood. *(Vertebrata)*

OBRUČNÍK, M. MUDr., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Palacký Univ., Fierlingerova ul., OLOMOUC, Czechoslovakia

O'CONNOR, R. J. M.D., D.T.M. — Research Labs., Westminster Med. School, Udall St., Vincent Square, LONDON S.W. 1, England

OELHAFEN, F. H. Dipl.Zool. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz
a. Embryonalentwicklung. *Culex pipiens (Diptera)*

O'FARRELL, A. F. B.Sc., ARCS — Dept. of Zool., Univ. of New England, ARMIDALE, N.S.W., Australia
a. Regeneration and the endocrine system. *Blattella germanica (Dictyoptera, Insecta)* (in collaboration with A. STOCK and Miss J. MORGAN)

OGREN, R. E. A.B., M.S., Ph.D. — Biol. Dept., Dickinson Coll., CARLISLE, Pa., U.S.A.
a. Embryonic development (maturation, cleavage). *Dilepsis undula (Cyclophyllidea, Cestodes)*
b. Structure and development of hexacanth embryos (oncospheres). *Hymenolepsis diminuta (Cyclophyllidea, Cestodes)*

OIKAWA, Miss I. B.Sc. — Fac. of Education, Kōchi Univ., KōCHI, Japan
a. The anterior transverse neural fold. *(Amphibia)*

b. Differentiation of synoptic activity of spinal cord during development, studied by electromyogram. *Rana nigromaculata (Anura)*

OKA, H. Ph.D., Prof. — Inst. of Zool., Univ. of Education, Otsuka-Kubomachi 24, Bunkyoku, TOKYO, Japan
a. Colony-specificity and selective fertilization in compound forms. *Botryllus primigenus (Ascidia)*
b. Metamorphosis of compound forms. *Perophora japonica (Ascidia)*
c. Regulation in the developing egg. *Tachypleus tridentatus (Xiphosura)* (in collaboration with K. SEKIGUCHI)

OKADA, K. D.Sc., Prof. — Biol. Inst., Gakugei Fac., Tokushima Univ., TOKUSHIMA, Japan

OKADA, T. S. — Lab. of Embryol. and Exper. Morphol., Zool. Inst., Dept. of Sci., Kyoto Univ., KYOTO, Japan

OKADA, Y. K. M.J.A., Dr., F.I.I.E., Prof. — Nat. Museum of Nat. Sci., Ueno-Park, Daito-ku, TOKYO, Japan
a. Developmental pathology. *Octopus* spec., *(Cephalopoda)*
b. Regeneration. *Octopus* spec. *(Cephalopoda)*

OKAZAKI, Miss K. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
a. A study of skeleton formation. *(Echinodermata)*

OKAZAKI, R. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Nucleic acid metabolism and cell multiplication during early development. *(Echinodermata, Amphibia)* (in collaboration with Mrs. T. OKAZAKI and Y. KURIKI)
b. Nucleic acid metabolism and cell multiplication in micro-organisms. *(Bacteria)* (in collaboration with Mrs. T. OKAZAKI and Y. KURIKI)

OKAZAKI, Mrs. T. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Nucleic acid metabolism and cell multiplication during early development. *(Echinodermata, Amphibia)* (in collaboration with R. OKAZAKI and Y. KURIKI)
b. Nucleic acid metabolism and cell multiplication in micro-organisms. *(Bacteria)* (in collaboration with R. OKAZAKI and Y. KURIKI)

OKSCHE, A. Dr.Med. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutschland
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)*

OLBRICH, E. Dr.med. — Histol.-embryol. Inst. der Univ., Müllerstr. 59, INNSBRUCK, Tyrol, Oesterreich

OLDFIELD, Miss F. E. B.Sc. — Embryol. Dept., Univ. Coll. London, Gower St., LONDON W.C. 1, England
a. Cell behaviour in tissue culture. *Gallus domesticus (Aves)*

OLIVIER, G. H. G. D.M., D.Sc., Prof. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Embryologie et croissance du squelette des membres (en particulier membres inférieurs). *Homo sapiens (Primates)* (en collaboration avec H. PINEAU)

b. Croissance prénatale globale. *Homo sapiens (Primates)* (en collaboration avec H. PINEAU)

OLIVO, O. M. M.I.I.E., Prof. — Ist. di Istol. e Fisiol. gen., Univ. di Bologna, Via Belmeloro N. 8, BOLOGNA, Italia

OLSSON, R. Fil.Dr. — Zootom. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden

a. Development of nuclei and fibres in the brain. *Polypterus* spec. *(Brachiopterygii)*

b. Development of Reissner's fibre and the infundibular and subcommissural organs. *Branchiostoma* spec. *(Cephalochordata)*, (several *Vertebrata)*

c. Development of the epithalamus. *(Brachiopterygii)*

OMODEO, P. Dr.Sci. — Ist. di Biol. e Zool. gen., Fac. di Med., Piazza S. Agostino 4, SIENA, Italia
(no embryological work in progress)

OOTA, Y. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Physiology and biochemistry of microsomal ribonucleoproteins in germinating bean seeds. *(Leguminosae)* (in collaboration with K. TAKATA)

OPPENHEIMER, Miss J. M. B.A., Ph.D., M.I.I.E. — Dept. of Biol., Bryn Mawr Coll., BRYN MAWR, Pa., U.S.A.

a. Differentiation of extra-embryonic grafts. *Fundulus heteroclitus (Teleostei)*

O'RAHILLY, R. M.Sc., M.D., Prof. — Dept. of Anat., Coll. of Med., Wayne State Univ., DETROIT 7, Mich., U.S.A.

a. Morphogenesis and developmental histochemistry of embryonic eye. *Gallus domesticus (Aves)* (in collaboration with D. B. MEYER)

ORSINI, Mrs. M. C. WARD B.A., Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON 6, Wis., U.S.A.

a. Fetal membranes, giant cells, and pregnancy changes in uterine vessels. *Mesocricetus auratus (Rodentia)*

b. Delayed implantation. *Mesocricetus auratus (Rodentia)*

ORSKA, Miss J. Ph.D. — Zakład Anat. Porównawczej, Inst. Zool. Uniw., ul. Sienkiewicza 21, WROCŁAW, Poland

ORTOLANI, Miss G. Dr. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Induction processes in embryonic development. *(Ascidiae, Urochordata)*

ORTS LLORCA, F. M.I.I.E., Prof. — Lab. de Anat. y Embryol., Fac. de Med., Ciudad Univ., MADRID, Spain

a. Microphthalmie expérimentale. *Gallus* spec. *(Aves)*

b. Production des "retinal septa". *Gallus* spec. *(Aves)*

OSAWA, S. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Test of the inductive effect of solutions of RNA's prepared from various tissues on the isolated ectoderm. *(Urodela, Mammalia)* (in collaboration with T. YAMADA)

b. Ribonucleic acid and protein in the differentiation of the gametophyte. *Dryopteris erythrosora (Pteridophyta)*

O'STEEN, W. K. B.A., M.S., Ph.D. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.

a. Regeneration of the intestine after transection of gut in one to several sites; reversal of segments; looping of segments. *Diemictylus viridescens virid. (Urodela)*
b. Regeneration of intestine in larval forms after simple single transections of loops of the coiled intestine, and re-establishment of functional intestine after removal of large percentage of digestive tract; effects on metamorphosis. *Rana clamitans (Anura)*

OSTROWSKI, K. Dr.med. — Zakład Histol. i Embriol., Ak. Med., ul. Chałubińskiego 5, WARSZAWA, Poland
a. The mechanism of osteogenesis induced by transplants of urinary bladder mucosa (tissue differentiation and experimental metaplasia).

OVERTON, Mrs. J. H. A.B., Ph.D. — Dept. of Zool., Univ. of Chicago, CHICAGO 37, Ill., U.S.A.
a. Morphogenesis of liver. *Ambystoma* spec. *(Urodela), Gallus domesticus (Aves)*
b. Effects of colchicine on the early blastoderm. *Gallus domesticus (Aves)*

PADYKULA, Miss H. A. B.S., M.A., Ph.D. — Dept. of Anat., Harvard Med. School, 24 Shattuck St., BOSTON 15, Mass., U.S.A.

PAI, S. Dr.rer.nat., F.I.I.E. — Lab. of Developm. Physiol., Inst. of Exper. Biol., Acad. Sinica, 320 Yo Yang Road, SHANGHAI, China

PANTELOURIS, E. M. B.Sc., Ph.D. — Zool. Dept., Queen's Univ., BELFAST, N. Ireland
a. Effects of radiation on foetuses, and means of alleviating them. *Mus musculus (Rodentia)*

PAPACONSTANTINOU, J. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Biochemical and immunochemical studies of lens development. *Gallus gallus (Aves)*

PAPI, F. Prof. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Reproduction and cytology. *(Rhabdocoela, Turbellaria)*

PARRANT, M. Dr. en Méd. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

PASCHMA, M. M.Ph. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. Normal development and regeneration. *(Enchytraeidae, Oligochaeta)*

PASQUINI, P. Ph.D., F.I.I.E., Prof. — Ist. di Zool. della Università, Viale Regina Elena 324 (al Policlinico), ROMA, Italia
a. Enzymes and embryonic development. *(Amphibia)* (in collaboration with D. PETRUCCI)
b. Growth and differentiation in regeneration. *Hydra* spec. *(Hydroidea), Planaria* spec. *(Turbellaria)* (in collaboration with D. PETRUCCI)

PASTEELS, J. M.D., F.I.I.E., Prof. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Univ., 97 Rue aux Laines, BRUXELLES, Belgique

PATERSON, Miss M. C. B.A., M.S., Ph.D. — Dept. of Zool., Vassar Coll., POUGHKEEPSIE, N.Y., U.S.A.
a. Regeneration studies with particular emphasis on the role of the nervous system and neurosecretory cells. *Clymenella torquata (Polychaeta)*

PATTEN, B. M. Ph.D., M.I.I.E., Prof. — Dept. of Anat., Med. School, Univ. of Michigan, 2500 East Med. Bldg., ANN ARBOR, Mich., U.S.A.

PEDERSEN, K. J. M.Sc. — Inst. for Alm. Zool., Universitetsparken 3, COPENHAGEN Ø, Denmark
a. Biochemistry of regeneration processes. *(Planariidae, Plathelminthes)*

PEHRSON, G. T. Dr. Phil., Prof. (Emer.) — Zootom. Inst., Univ. of Stockholm, Rådmansgatan 70A, STOCKHOLM, Sweden
a. Development and morphology of the skull and of the lateralis system. *(Teleostei)*

PENZLIN, H. Dr. rer. nat. — Zool. Inst. der Univ. Rostock, Stalinplatz, ROSTOCK, Deutsche Demokratische Republik
a. Physiologie der Regeneration. *Cordylophora caspia (Hydrozoa)*
b. Physiologie und Histologie der Regeneration. *Blattella* spec., *Periplaneta* spec. *(Orthoptera)*

PERA, L. M.D. — Inst. of Anat. and Histoembryol., Univ. of Pisa, Via Roma 33, PISA, Italy
a. Comparative studies on the sympathetic nervous system. *(Reptilia; Aves)*
b. Comparative research on the cloaca. *(Pisces; Reptilia; Aves)*

† PERCIVAL, E. B.Sc., Prof. — Dept. of Zool., Canterbury Univ. Coll., CHRISTCHURCH, New Zealand
(deceased)

PERKOWSKA, Mrs. E. MOSER Dr. — Dept. of Cytol., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a. Some biochemical characteristics of embryonic mitochondria. *Rattus* spec. *(Rodentia)*

PERLMANN, H. P. Ph.D. — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Immunological approach to the problems of fertilization and differentiation. *(Echinoidea)*
b. Serological study of proteins during early development. *Paracentrotus lividus (Echinodermata)* (in collaboration with Mrs. J. C. KALTENBACH, Evanston, Ill., U.S.A.)

PERRENOT, Miss M. Lic. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Différenciation du complexe surrénalien et éveil des corrélations hypophyso-surrénaliennes. *Gallus* spec. *(Aves)*

PERRI, T. Dott., M.I.I.E., Prof. — Ist. di Anat. Comp., Fac. di Sci., S. Pietro, PERUGIA, Italia
a. Trapianti eteroplastici di arti. *Bufo vulgaris, B. viridis (Anura)*
b. Correlazioni tra sistema nervoso ed arti. *Bufo vulgaris, B. viridis (Anura)*
c. Azione biologica dei raggi X. *Bufo vulgaris, B. viridis (Anura)*

PERRY, Miss M. M. B.Sc. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland
a. Developmental effects of metabolic antagonists. *(Evertebrata, Vertebrata)* (in collaboration with C. H. WADDINGTON)
b. Electron microscope studies of gene action. (in collaboration with C. H. WADDINGTON)
c. Study of certain features of developing embryos using electronmicrographs. *(Diptera), (Amphibia)* (in collaboration with G. G. SELMAN and C. H. WADDINGTON)

PERTUSA, J. Lic.Sc., Dr.Ph. — Dept. of Embryol., Univ. Coll. London, Gower St., LONDON W.C. 1, England

a. Studies on morphogenetic movements in the blastoderm. *Gallus domesticus (Aves)*

PETERS, A. B.Sc., Ph.D. — Dept. of Anat., Univ. of Edinburgh, Univ. New Buildings, Teviot Row, EDINBURGH 8, Scotland

a. Electron microscope study of Schwann cell — axon relationships in developing nerves. *Xenopus laevis (Anura)*

PETERS, Th. Dr.Med. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutschland

a. Die Wirkung kleiner Röntgendosen auf junge Keimstadien. *Triturus alpestris (Urodela)*

PETRUCCI, D. — Ist. di Zool. della Università, Viale Regina Elena 324 (al Policlinico), ROMA, Italia

a. Enzymes and embryonic development. *(Amphibia)* (in collaboration with P. PASQUINI)

b. Growth and differentiation in regeneration. *Hydra* spec. *(Hydroidea), Planaria* spec. *(Turbellaria)* (in collaboration with P. PASQUINI)

PETRY, G. Dr.Med., Prof. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutschland

a. Funktionelle Histologie der Eihäute. *(Reptilia; Aves; Mammalia)*

PFLUGFELDER, O. Dr. rer. nat., Prof. — Zool. Inst. der Landwirtschaftl. Hochschule, STUTTGART-HOHENHEIM, Deutschland

a. Änderung des Stoffwechsels nach Störung des hormonalen Gleichgewichts. *(Insecta)*

b. Einfluss der Pinealektomie auf die Postembryonalentwicklung. *Lebistes reticulatus (Teleostei), (Amphibia, Sauropsida) secta)*

c. Histophysiologie der Corpora cardiaca (Elektronenmikroskopisch). *(In-*

d. Entwicklung. *(Acari, Arachnoidea)*

e. Wirkungsmechanismen von Thyreostatika. *Rana temporaria, Xenopus laevis (Anura), Gallus domesticus (Aves)*

PIATT, J. A.B., M.A., Ph.D. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

PIEPHO, H. Dr.Phil., Prof. — Zool. Inst. der Univ., Berlinerstr. 28, GÖTTINGEN, Deutschland

a. Verhalten und Hormone in der Metamorphose. *Pilina tiliae (Lepidoptera)*

b. Physiologie der Schuppenbildung. *Lepisma saccharina (Thysanura, Apterygota)*

PILLERI, Y. Dr.med. — Hirnanat. Inst. der Psychiatr. Univ. Klinik, Med. Fak., Waldau, BERN, Schweiz

a. Entwicklung des Gehirns. *Castor canadensis (Rodentia)*

b. Über die Protuberantia sclerae am embryonalen Auge. *Homo sapiens (Primates)*

PINCUS, G. Dr.,Prof. — Worcester Foundation for Exper. Biol., 222 Maple Ave., SHREWSBURY, Mass., U.S.A.

PINEAU, H. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Embryologie et croissance du squelette des membres (en particulier membres inférieurs). *Homo sapiens (Primates)* (en collaboration avec G. H. G. OLIVIER)

b. Croissance prénatale globale. *Homo sapiens (Primates)* (en collaboration avec G. H. G. OLIVIER)

PIRIA, F. — Cattedra di Istol. ed Embriol. gener., Fac. di Med. e Chir. dell'Univ. di Milano, Via Ponzio 7, MILANO, Italia
a. Histochemical observations and paper electrophoresis on the ground substance of the umbilical cord. *Homo sapiens (Primates)* (in collaboration with Mrs. V. PRETO PARVIS)

PLESNER, P. M.D. — Biol. Inst. of the Carlsberg Foundation, 16, Tagensvej, COPENHAGEN N., Denmark
a. Studies on the biochemistry and physiology of synchronized cell systems. *Tetrahymena pyriformis (Holotricha, Ciliata)* (in collaboration with K. HAMBURGER and E. ZEUTHEN)

PLETZEN, R. van D.Sc. — Dept. of Zool., Univ. of O.F.S., BLOEMFONTEIN, South Africa
(no embryological work in progress)

PLUTA, E. Mgr. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Regeneration of the thyroid gland after experimental injury.
b. Physiological restoration of the thyroid gland.

POHLEY, H.-J. Dr. — Inst. für Entwicklungsphysiologie, Univ. zu Köln, Gyrhofstr. 17, KÖLN-LINDENTHAL, Deutschland
a. Entwicklung der Flügel. Regenerierenden Anlagen auf den Zeitpunkt der Puppenhäutung. *Ephestia kühniella (Lepidoptera)*
b. Einfluss der Antennenlänge auf die Dauer der Larvenstadien. *Periplaneta americana (Orthoptera)*

POLEZHAEV, L. V. Dr. Biol. Sci., F.I.I.E., Prof. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Regeneration of cranium bones. *Mus domesticus, Rattus norvegicus, Oryctolagus cuniculus, Felis domestica, Canis familiaris (Mammalia)*
b. Regenerative capacity and immunity in ontogenesis. *Rana temporaria, Bombina bombina (Anura)*
c. Regeneration of brain. *Felis domestica, Canis familiaris, Rattus norvegicus (Mammalia)*
d. Regeneration of myocardium. *Rattus norvegicus, Oryctolagus cuniculus, Felis domestica (Mammalia)*
e. Regeneration of dental tissue. *Canis familiaris (Carnivora)*

POPOV, V. V., Dr., Prof. — Dept. of Embryol., Moscow State Univ., MOSCOW, U.S.S.R.

POPP, R. A. Ph.D. — Biol. Div., Oak Ridge National Lab., P.O. Box Y, OAK RIDGE, Tenn., U.S.A.
a. Red blood cell lineage during embryonic development. *Mus musculus (Rodentia)*

PORTMANN, A. Dr.Phil., Prof. — Zool. Anstalt der Univ., Rheinsprung 9, BASEL, Schweiz
a. Embryology and postembryonic development. *(Araneida)*
b. Embryology of the forebrain (including postembryonic stages). *(Aves; Mammalia)*
c. Development of skin pattern. *(Reptilia)*
d. Development. *(Opisthobranchia, Gastropoda)*
e. General embryology. *Octopus* spec. *(Cephalopoda)*

POULSON, D. F. B.S., Ph.D., Prof. — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., 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 bifasciata, D. melanogaster, D. willistoni (Diptera)*

PRASAD, M. R. N. M.Sc., Ph.D. — Dept. of Zool., Univ. of Delhi, DELHI 8, India
a. Reproductive cycles. *Tatera indica cuvierii (Cricetinae, Rodentia)*
b. Delayed implantation studies. *Cricetus auratus, Rattus* spec. *(Rodentia)*
c. Morphogenesis of the foetal membranes. *Scalopus aquaticus, Parascalops breweri, Scapanus townsendi (Insectivora), Tatera indica cuvierii (Cricetinae, Rodentia)*

PREDA, V. Prof. — Catedra de Biologie, Institutul Medico-Farmaceutic, Strada 1 mai, CLUJ, Roumania
a. Influence de la température d'incubation sur le métabolisme de l'oeuf, *Gallus* spec. *(Aves)*
b. Influence du système nerveux central sur le métabolisme de l'oeuf. *Gallus* spec. *(Aves)*
c. Changement du sexe par l'hormone gonadotrope chorial. *Gallus* spec. *(Aves), Zea mais*

PRETO PARVIS, Mrs. V. Dott.Med., Prof. — Cattedra di Istol. ed Embriol. gener., Fac. di Med. e Chir. dell'Univ. di Milano, Via Ponzio 7, MILANO, Italia
a. Nucleic acids and fatty substances in nervous cells during development. *Rattus norvegicus, Felis domestica, Cavia cobaya (Mammalia)*
b. Morphological and histochemical studies of histogenesis of mucous and chondroid tissues. Mucous tissue of the embryo (gelatina cardiaca) and of the valves of the heart. *Gallus domesticus (Aves)*
c. Quantitative study about the pre- and postnatal increase of cerebellar cortex and of its different strata. *Felis domestica, Cavia cobaya, Rattus norvegicus (Mammalia)*
d. Histochemical observations and paper electrophoresis on the ground substance of the umbilical cord. *Homo sapiens (Primates)* (in collaboration with F. PIRIA)

PRIESCHING, A. M.D. — Anat. Inst., Währingerstr. 13, WIEN 9, Oesterreich

PUCCINELLI, I. Dr. Nat. Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Development and cytology. *(Tricladidea, Turbellaria)*

PUJIULA, J., S.I. M.I.E., M.R.Ac.Med. — Inst. Biol. de Sarriá, Dr. Amigant 14, BARCELONA, Sarriá, España

QUÉNU, L. Dr. en Méd. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement du péritoine. *Homo sapiens (Primates)*

QUEREUX, P. Dr. en Méd. — Lab. d'Anat. fonctionnelle et de Neuro-anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement de la cavité péritonéale. *Homo sapiens (Primates)*

QUERNER, H. Dr. rer. nat. — Inst. für exp. Krebsforschung der Univ. Heidelberg, Voss-Strasse 3, HEIDELBERG, Deutschland
a. Hormonphysiologische Untersuchungen. *(Cyprinodontidae, Teleostei)*
b. Differenzierung primärer und sekundärer Geschlechtsorgane in vitro. *(Cyprinodontidae, Teleostei)*

QURESHI, W. H. M.Sc. — Dept. of Zool., Government Coll., LAHORE, Pakistan
a. Reproduction and development. *Suncus murinus (Soricidae, Insectivora)*

RADECKA, Mrs. E. ERDMAN M.Ph. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. The morphogenetical functions of the thyroid gland and hypophysis. *(Amphibia, Reptilia, Aves)*

RAFFERTY, K. A. Jr. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Johns Hopkins Univ., 709 N. Wolfe St., BALTIMORE 5, Md., U.S.A.
a. Histospecificity of neoplastic agents. *Rana pipiens (Anura)*

RAMENSKAIA, Mrs. G. P. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Action of DNA on morphogenesis. *Bombyx mori (Lepidoptera)* (in collaboration with Mrs. T. A. BEDNJAKOVA and G. I. GINZBURG)

RAMIREZ de ARELLANO, Miss M. I. R. B.S., M.S., Ph.D., M.B., M.D. — Lab of Perinatal Physiol., NINDB, School of Med., SAN JUAN, P.R., U.S.A.

RAMSEY, Miss E. M. A.B., M.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Placentation. Study of marginal sinus and venous drainage of placenta. *Macaca mulatta, Homo sapiens (Primates)*
b. Study of circulation in the maternal placenta. *Macaca mulatta, Homo sapiens (Primates)*
c. Determinations of blood, amniotic and intervillous space pressures throughout pregnancy. *Macaca mulatta (Primates)* (in collaboration with G. W. CORNER, Jr. and W. N. LONG)

RANCK, J. B.S., M.D. — Lab. of Perinatal Physiol., NINDB, School of Med., SAN JUAN, P.R., U.S.A.

RANZI, S. Ph.D., F.I.I.E., Prof. — Ist. di Zool. e Anat. Comp., Univ. di Milano, Via Celoria 10, MILANO, Italia

RANZOLI, F. Dr., Prof. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
a. Nucleolar changes and cycle of the ribonucleic acids during oogenesis. *(Ascidiaceae)*
b. Regeneration and morphogenesis of the thoracic segments. *Salmacina incrustans (Serpulidae, Polychaeta)*
c. Development of gonads. *(Urodela)*
d. Cytosexual differentiation. *(Pulmonata, Gastropoda)*

RAPPAPORT, R. Jr. B.S., M.S., Ph.D. — Dept. of Biol., Union Coll., SCHENECTADY 8, N.Y., U.S.A.
a. Role of water in growth and morphogenesis. *Rana pipiens (Anura)*
b. Early embryology. *Marinogammarus obtusatus (Gammaridae, Crustacea)*

RASMUSSEN, L. cand.mag. — Biol. Inst. of the Carlsberg Foundation, 16, Tagensvej, COPENHAGEN N., Denmark
a. Studies on growth and division in pure cultures. *Acanthamoeba* spec. *(Amoebidae)* (in collaboration with E. ZEUTHEN)

RAUNICH, L. Ph.D., M.D., M.I.I.E., Prof. — Ist. di Anat. Comp., Univ. di Ferrara, Via Boldini 14, FERRARA, Italia
— Ist. di Anat. Comp., Via Belmeloro 8, BOLOGNA (103), Italia
a. Development of blood and vascular system. *Petromyzon* spec. *(Cyclostomata)*, *Amia* spec., *Lepidosteus* spec. *(Holostei)*, *Salmo* spec. *(Teleostei)*
b. Determination of neural plate. *Triton* spec., *Ambystoma* spec. *(Urodela)*
c. Neural crest development. *(Amphibia)*
d. Action of carcinogenic hydrocarbons. *(Amphibia)*
e. Steroids during development (chemical detection). *(Amphibia)*

RAVEN, Chr. P. Dr.Sc., F.I.I.E., F.R.A., Prof. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland
a. Influence of lithium on morphogenesis. *Aplysia limacina (Gastropoda)*
b. Influence of various kations on development. *Limnaea stagnalis (Gastropoda)* (in collaboration with W. L. M. GEILENKIRCHEN)
c. Development of stomodaeum. *Limnaea stagnalis (Gastropoda)*
d. Maturation divisions of eggs. Various spp. *(Gastropoda)*
e. Influence of lithium on mitosis and cleavage. *Limnaea stagnalis (Gastropoda)* (in collaboration with W. L. M. GEILENKIRCHEN and E. D. NIJENHUIS)
f. Influence of various alcohols on development. *Limnaea stagnalis (Gastropoda)* (in collaboration with W. L. M. GEILENKIRCHEN)
g. Influence of centrifuging on development. *Limnaea stagnalis (Gastropoda)*
h. Cytochemistry of RNA in early development. *Limnaea stagnalis (Gastropoda)*
i. Cell-lineage and head pattern in heat-shock treated embryos. *Limnaea stagnalis (Gastropoda)* (in collaboration with N. H. VERDONK)
k. Cytochemistry of oogenesis. *Limnaea stagnalis (Gastropoda)* (in collaboration with Miss G. A. UBBELS)
l. Pinocytosis in cleavage stages and gastrulae. *Limnaea stagnalis (Gastropoda)* (in collaboration with P. F. ELBERS)
m. Application of information theory to oogenesis and embryonic development.

RAWLES, Miss M. E. Ph.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Development of the skin and its derivatives. *Gallus gallus (Aves)*

RAWLS, J. M. B.S., M.A. — Dept. of Biol., Univ. of Florida, GAINESVILLE, Florida, U.S.A.
a. Sperm enzyme activity. *Mellita quinquiesperforata (Clypeastroidea, Echinoidea)*

RAY, A. B.Sc.(Hons) — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
a. Metabolic changes in fat cells. *Periplaneta* spec. *(Orthoptera)*

RAYNAUD, A. Dr. ès Sci. — Lab. de l'Inst. Pasteur, Quartier des Vieux Moulins, SANNOIS (Seine et Oise), France
a. Etude du développement normal du tractus génital chez l'embryon. *Anguis fragilis (Lacertilia)*
b. Action des hormones sexuelles sur le développement des organes sexuels de l'embryon. *Anguis fragilis (Lacertilia)*
c. Action des rayons X sur le développement embryonnaire. *Anguis fragilis (Lacertilia)*

REAMS, W. M. Jr. B.S., Ph.D. — Dept. of Anat., Med. Coll. of Virginia, RICHMOND 19, Va., U.S.A.

a. Ontogeny of melanocyte form. *Gallus domesticus (Aves)*

b. Investigation of the differentiation of melanocytes in the connective tissues of the body of animals of the PET/MCV strain. *Mus musculus (Rodentia)*

REBERT, R. R. B.A., M.A., Ph.D. — Dept. of Med. Res., Merck Sharp and Dohme Research Labs., Div. of Merck and Co. Inc., 4545 Oleatha Ave., ST LOUIS 16, Mo., U.S.A.

RECOURT, A. M.Sc. — Centrum voor Electronenmicroscopie, Janskerkhof 3, UTRECHT, Holland

a. Electron microscopy of the gonad. *Limnaea stagnalis (Gastropoda)*

REGGIANI, Miss M. P. Dr. — Ist. di Zool. e Anat. comp., Via Università 4, MODENA, Italia

REIS, R. H. Ph.D. — Dept. of Biol., Marquette Univ., 1217 West Wisconsin Ave., MILWAUKEE 3, Wis., U.S.A.

a. A study of the anomalous renal vessels and inferior vena cava. *Canis familiaris, Felis domestica (Carnivora)*

b. A study of the anomalous renal vessels and inferior vena cava. *Homo sapiens (Primates)*

c. The development of the postcava. *Canis familiaris (Carnivora)*

RENGEL, S. 'L. Dr.Med., Prof. — Dept. of Anat., Fac. de Ci. Med., Universidad de Los Andes, MÉRIDA, Venezuela

a. Development of the connective tissue (mouth, pelvis etc.) *Homo sapiens (Primates)*

RESTIVO, Miss F. Dr. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Glycogen content during development. *(Ascidiaceae)*

REVERBERI, G. Dr., F.I.I.E., Prof. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. The role of some enzymes in embryonic development. *(*Marine *Evertebrata)*

REXED, B. M.D., Prof. — Dept. of Anat., Univ. of Uppsala, UPPSALA, Sweden

(no embryological work in progress)

REYER, R. W. B.A., M.A., Ph.D., M.I.I.E. — Dept. of Microanat., School of Med., Med. Center, W. Virginia Univ., MORGANTOWN, W.Va., 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)* (in collaboration with L. S. STONE, New Haven)

b. A study of the coordinate induction systems operating in the development of the embryonic lens. *Triturus viridescens, Ambystoma punctatum (Urodela)*

REYNOLDS, S. R. M. A.B., M.A., Ph.D., D.Sc.(hon.), Dr.hon.causa (Univ. Catol. de Chile), Prof.hon.causa (Fac. de Med., Montevideo) — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., 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)*

REYSS-BRION (DUCREAU), Mrs. M. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tétarol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Influence des rayons X sur le développement embryonnaire. *Pleurodeles Waltlii (Urodela), Galles* spec. *(Aves)*
b. Influence des rayons X sur le pouvoir inducteur de la gastrula. *Pleurodeles Waltlii (Urodela)*

RICHTER, K. M. B.A., M.A., Ph.D. — Dept. of Anat., School of Med., Univ. of Oklahoma, OKLAHOMA City, Okla., U.S.A.

RIECK, A. F. B.S., M.S., Ph.D. — Dept. of Physiol., Marquette Univ., 561 N. 15th St., MILWAUKEE 3, Wis., U.S.A.
a. Quantitative correlation of the regenerative process with thyroid activity. *Triturus viridescens (Urodela)*
b. Studies on the determination of the limb regeneration blastema. *Ambystoma maculatum (Urodela)*
c. Carcinogenicity versus inhibition of regeneration. *Ambystoma maculatum (Urodela)*
d. Studies on cleavage delayed with ultraviolet radiation. *Echinarchnius parma (Echinoidea)*

ROBERTSON, G. G. B.A., B.Sc., Ph.D., Prof. — Div. of Anat., Med. Units, Fac. of Biol. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.
a. Virus-induced abnormalities in embryos. *Gallus domesticus (Aves)*
b. Analysis of growth rates of prenatal ossification centers. *Homo sapiens (Primates)*

ROCCA, E. Dr. Biol. Sci. — Ist. di Zool. e Anat. comp., Univ. di Milano, Via Celoria 10, MILANO, Italia

ROCK, J. M.D. — Free Hospital for Women, 245 Pond Ave., BROOKLINE, Mass., U.S.A.
a. Histochemical observations on early fertilized ova of less than 14 days age. *Homo sapiens (Primates)* (in collaboration with A. T. HERTIG, W. J. MULLIGAN and Miss E. C. ADAMS)

ROCKSTEIN, M. A.B., M. A., Ph.D. — Bellevue Med. Center, New York Univ., 550 First Ave., NEW YORK 16, N.Y., 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)*

RODRIGUEZ (GALINDO), Mrs. M. — Lab. d'Hormonol. et de Cytol. Expér., Ecole pratique des Hautes Etudes, Hopital Broca, 111, Rue L. M. Nordmann, PARIS VIII, France
a. Métabolisme du ^{35}S dans la physiologie de la reproduction. *(Mammalia)* (en collaboration avec R. MORICARD et Miss M. M. C. S. GOTHIÉ)

b. Equilibres hormonaux modifiant le métabolisme du ^{35}S dans la secrétion cervicale. *(Mammalia)* (en collaboration avec R. MORICARD)

ROGERS, A. W. B.Sc., M.B., B.S. — Dept. of Anat., The School of Med., Birmingham Univ., Edgbaston, BIRMINGHAM 15, England

a. Isotopic study of gametogenesis and lymphoid tissue.

ROLLHÄUSER, H. Dr.med., Prof. — Anat. Inst., Friedrichstr. 24, GIESSEN, Deutschland

ROLLHÄUSER (TER HORST), Mrs. J. O. B. Dr.rer.nat. — Anat. Inst., Friedrichstr. 24, GIESSEN, Deutschland

ROMANI, Miss M. L. Dr. — Ist. di Zool. e Anat. comp., Via Università 4, MODENA, Italia

ROMANKOWOWA, Mrs. A. M.Sc. — Zakład Anat. Porownawczej, Inst. Zool. Uniw., ul. Sienkiewicza 21, WROCŁAW, Poland

ROMANOFF, A. L. B.S., M.S., Ph.D., Prof. — Lab. of Chem. Embryol., Cornell Univ., c/o Rice Hall 105, ITHACA, N.Y., U.S.A.

ROMANOVSKÝ, A. RNDr., C.Sc. — Dept. of Gener. and Exper. Zool., Zool. Inst. of Charles Univ., Viničná 7, PRAHA II, Czechoslovakia

a. Hybridization and parabiosis. *(Amphibia)*

b. Transplantation of nuclei and cytoplasmic components. *(Amphibia)* (in collaboration with F. SLÁDEČEK and J. NEDVÍDEK)

ROMIJN, C. Dr., Prof. — Lab. for Veterinary Physiol., Alexander Numankade 93, UTRECHT, Holland

a. Investigations on the respiratory metabolism and heat regulation in the embryo. *Gallus domesticus (Aves)*

b. The role of the allantoic circulation in the heat elimination of the embryo. *Gallus domesticus (Aves)*

c. Direct and indirect calorimetry of the growing embryo. *Gallus domesticus (Aves)*

RONCORONI, G. Dott.Med. — Cattedra di Istol. ed Embriol. gener., Fac. di Med. e Chir. dell'Univ. di Milano, Via Ponzio 7, MILANO, Italia

a. Studies of solubility of embryonic glycogen with freezing-drying, freezing-substitution and chemical methods of fixation. *(Mammalia)*

b. Studies of embryonic lipids with freezing-drying and carbowax-embedding. *(Mammalia)*

ROOFE, P. G. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Kansas, LAWRENCE,Kansas, U.S.A.

a. Cytochemical and microchemical study of the developing nervous system and its relationship to developing behaviour patterns. Acid and alkaline phosphatase in isolated areas of brain and spinal cord. *Ambystoma maculatum (Urodela)* (in collaboration with Mrs. E. L. WENGER and B. S. WENGER)

b. Histochemical study of the developing nervous system and its relationship to developing behaviour patterns. DNA, RNA, acid and alkaline phosphatase. *Ambystoma maculatum (Urodela)* (in collaboration with Mrs. E. L. WENGER)

ROOSEN-RUNGE, E. C. M.D. — Dept. of Anat., School of Med., Univ. of Washington, SEATTLE 5, Wash., U.S.A.

ROSE, S. M. Ph.D., M.I.I.E., Prof. — Vivarium, Wright and Healey Streets, Univ. of Illinois, CHAMPAIGN, Ill., U.S.A.

ROSENBAUM, R. M. B.S., A.M., Ph.D. — Dept. of Pathol., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Road and Morris Park Ave., NEW YORK 61, N.Y., U.S.A.

ROSIN, S. Dr., Prof. — Abt. f. Genet., Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

ROSS, Miss J. R. W. B.Sc., M.B., Ch.B. — Anat. Dept., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C. 2, England

a. The development of the genital tract. *Ovis aries (Artiodactyla)*

ROSSI, A. Dr. — Ist. di Anat. comp. "G. B. Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia

a. Xenoplastic grafts. *(Amphibia)*

ROSSINI, Miss M. C. Dr. Nat. Sci. — Ist. di Anat. Comp., Via Belmeloro 8, BOLOGNA (103), Italia

ROSTAND, J. — 29 Rue Pradier, VILLE D'AVRAY, Seine et Oise, 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)*

ROTHENBUHLER, W. C. B.S., M.S., Ph.D. — Dept. of Zool. and Entomol., Iowa State Coll., AMES, Iowa, U.S.A.

a. Cleavage of zygote and accessory sperms in the origin of gynandromorphs. *Apis mellifera (Hymenoptera)*
b. Genetics of sex determination in haplo-diploid mosaics. *Apis mellifera (Hymenoptera)*

ROTHSCHILD, Lord — Univ. Museum of Zool., Univ. of Cambridge, Downing St., CAMBRIDGE, England

ROUILLER, Ch. Prof — Inst. d'Histol. et d'Embryol., Ecole de Méd., GENÈVE, Suisse
(no embryological work in progress)

ROUX, Ch. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Influence tératogène des intoxications. *Mus rattus (Rodentia)*
b. Influence tératogène des infections. *Mus rattus (Rodentia)*

RUBEN, L. N. A.B., M.S., Ph.D. — Biol. Dept., Reed College, PORTLAND 2, Ore., U.S.A.

a. Xenoplastic studies. 1. The interrelationships of cancer and regenerating sytems. 2. The induction of supernumerary limbs. *Rana pipiens, Ambystoma opacum, Triturus viridescens, Taricha granulosa (Amphibia)*

RUCH, J. V. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France

a. Recherches sur la symétrie bilaterale. *(Pisces)*
b. Recherches sur le maintien des canaux de Müller.

RÜDEBERG, S. I. Fil.lic. — Tornblad-Inst. for comp. Embryol., Biskopsgatan 7, LUND, Sweden

a. Embryogenesis of cerebellar nuclei. *(Vertebrata)*

RUDNICK, Miss D. Ph.D., M.I.I.E. — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.

a. Glutamine metabolism in development. *Gallus* spec. *(Aves)*

RUGH, R. A.B., M.A., Ph.D., M.I.I.E. — Radiological Research Lab., Dept. of Radiol., Coll. of Physicians & Surgeons, Columbia Univ., 630 West 168th St., NEW YORK 32, N.Y., 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)*

RULON, G. O. Ph.D. — Dept. of Biol. Sci., Northwestern Univ., EVANSTON, Ill., U.S.A.

a. The control of growth and differentiation through the use of enzyme inhibitors and activators. *(Echinoidea)*
b. The control of head forms and reconstitutional processes with enzyme inhibitors. *(Planariidae, Turbellaria)*

RUNNER, M. N. Ph.D. — Roscoe B. Jackson Memorial Lab., BAR HARBOR, Me., U.S.A.

a. Hormonal induction of ovulation, conception and pregnancy in prepuberal animals. *Mus musculus (Rodentia)*
b. Parental and dietary influences on skeletal morphogenesis. *Mus musculus (Rodentia)*
c. Carbohydrate metabolism in relation to chemically induced phenocopies of the skeleton. *Mus musculus (Rodentia)*
d. Hereditary susceptibility to congenital deformity. *Mus musculus (Rodentia)*

RUNNSTRÖM, J. A. M. Ph.D., M.D., F.I.I.E., Prof. (Emer) — Wenner-Grens Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. The activation impulse in fertilization and artificial parthenogenesis. *(Echinoidea)*
b. Fine cell structure and cell division. *(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 the vegetal agents. *(Echinoidea)*

RUSSELL (BRAUCH), Mrs. L. Ph.D. — Mammalian Genet. and Development Sect., Biol. Div., Oak Ridge Nat. Lab., P.O. Box Y, OAK RIDGE, Tenn., U.S.A.

a. Comparison of the effects of continuous irradiation with those of single, acute doses given during embryonic development. *Mus musculus (Rodentia)*
b. Effects of irradiation of early cleavage stages. *Mus musculus (Rodentia)*

RUTH, R. F. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.

a. Biochemical and immunochemical analysis of the synthesis and distribution of the contractile proteins, actin, myosin (esp. H-meromyosin) and tropomyosin in the development of the heart in the early embryo. *Gallus gallus (Aves)* (in collaboration with J. D. EBERT)
b. Cytochemistry of leukocytes during development of lymphoidal organs. *Gallus gallus (Aves), Cavia porcellus (Rodentia)*

RUTSCHKY, C. W. Ph.D. — Dept. of Zool. & Entomol., Pennsylvania State Univ., University Park, Pa., U.S.A.
a. Development of nervous system. *(Insecta)*

† RUUD, Miss G. Cand.real. — Zool. Lab., Univ. of Oslo, OSLO-Blindern, Norway
(deceased)

RYCHTER, Z. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA II, Czechoslovakia
a. Experimental morphology of the aortic arches and of the heartloop. *Gallus domesticus (Aves)*
b. Experimental analysis of cardiovascular anomalies. *Gallus domesticus (Aves)*

SABBADIN, A. Dr. — Ist. di Zool. e Anat. comp., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. Gonad development. Influence of thyroidectomy and hypophysectomy: role of mesonephros and adrenals. *(Amphibia)*
b. Sexual and asuexual reproduction. *(Ascidiacea)*

SACHS, R. M. B.S., Ph.D. — Dept. of Floricult., Univ. of California, 300 Veteran Ave., LOS ANGELES 24, Cal., U.S.A.
a. Shoot histogenesis; subapical meristematic activity and its regulation by gibberellic acid. *Samolus parviflorus*
b. Cell division; calculation of generation and karyokinesis time; thymidine and adenine incorporation. *Samolus parviflorus*
c. Shoot histogenesis; subapical meristematic activity and its regulation by gibberellic acid, AMO-1618, and maleic hydrazide. *Chrysanthemum morifolium*

SAKAI, H. M.A. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
a. A method for the isolation of the egg cortex. *(Echinoidea)*
b. The behaviour of a thread model made with a protein fraction of the egg. *(Echinoidea)*

SALA, M., S.J. Dr. — Ist. di Zool. e Anat. comp., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. Distribution of activating and transforming principles in the archenteron roof of the neurula (analysis of the regional induction of the nervous system). *Ambystoma mexicanum (Urodela)*
b. Determination of the peripheral nervous system. *(Anura)*

SALFI, M. Dr. Sci. Nat., Prof. — Ist. di Zool. dell'Università di Napoli, Via Mezzocannone 8, NAPOLI, Italia
a. Blastogenesi. *(Ascidiacea)*

SALZGEBER, Miss B. Dr ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tétarol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), 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.

SAMANO BISHOP, Miss A. Dr. — Inst. de Biol., Ciudad Universitaria, MÉXICO D.F., México

SAMBUICHI, H. B.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan

SANDER, K. Dipl.biol., Ph.D. — Zool. Inst. der Univ. Würzburg, Röntgenring 10, WÜRZBURG, Deutschland

a. Primitiventwicklung. *Euscelis plebejus (Cicadina, Homoptera)*

SANGVICHIEN, S. M.B., M.D. — Dept. of Anat., Fac. of Med. and Siriraj Hospital, Univ. of Med. Sci., BANGKOK, Thailand

SANYAL, S. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

a. Mechanics of bud formation. *Hydra* spec. *(Coelenterata)*
b. Determination and individuation. *Hydra* spec. *(Coelenterata)* (in collaboration with S. MOOKERJEE, S. N. NAGARAJAN and A. K. SINHA)

SARA, M. Dott. Nat. Sci. — Ist. di Zool. dell'Università di Napoli, Via Mezzocannone 8, NAPOLI, Italia

a. Gametogenesi. *(Porifera)*

SARKAR, D. N. — Cell Research Unit, Dept. of Zool., Calcutta Univ., 35 Ballygunje Circular Road, CALCUTTA 19, India

a. Formation of the notochord. *Gallus domesticus (Aves)* (in collaboration with D. N. GANGULY)
b. Histochemical studies of the vertebral column during morphogenesis. *Bufo melanostictus (Anura)* (in collaboration with D. N. GANGULY)
c. Effect of neurohormones on development and metamorphosis. *Bombyx mori, Chrysocoris stolli, Macroceroea grandis* and other spp. *(Insecta)* (in collaboration with D. N. GANGULY, P. BANARJEE, D. DEV, M. BANARJEE and B. BOSE)

SASAKI, N. M.Sc. — Dept. of Biol., Fac. of Sci., Kumamoto Univ., KUMAMOTO-Shi, Japan

a. Lens induction by a crude protein extrated from rabbit bone-marrow.
b. Inductive effects of chick-embryo juice on presumptive epidermis. *Triturus pyrrhogaster (Urodela)*
c. Physico-chemical nature of inducing substances.

SATO, T. D.Sc., D.Phil.Nat., M.I.I.E., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

SAUNDERS, J. W. B.S., M.S., Ph.D., M.I.I.E. — Dept. of Biol., Marquette Univ., 1217 West Wisconsin Ave., MILWAUKEE 3, Wis., U.S.A.

a. Identification of prospective pigment cells. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Factors affecting the rate of melanin synthesis in embryonic tissues. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
c. The role of ectoderm in the development of the limbs. *Gallus domesticus (Aves)*
d. An analysis of the factors affecting tract-specificity in embryonic feather areas. *Gallus domesticus (Aves)*
e. Ectoderm-mesoderm interactions in formation of the limbs. *Gallus domesticus (Aves)*
f. Cellular deaths in morphogenesis of the embryonic limbs. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
g. Production of tumor-specific antibodies. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
h. Fate-maps for the limb buds. *Gallus domesticus (Aves)*

SAUSER, G. Dr., Prof. — Histol.-Embryol. Inst. der Univ., Müllerstr. 59, INNSBRUCK, Tyrol, Oesterreich

SAWIN, P. B. B.S., M.S., Sc.D. — Roscoe B. Jackson Memorial Lab., BAR HARBOR, Me., U.S.A.

SAXÉN, L. O. M.A., M.D. — Zool. Lab., Univ. of Helsinki, P. Rautatiekatu 13, HELSINKI, Finland

a. The inductive action of malignant tumors. *Triturus* spec. *(Urodela)* (in collaboration with S. I. TOIVONEN)
b. The mechanism of the induction produced by heterogenous inductors. *Triturus* spec. *(Urodela)* (in collaboration with S. I. TOIVONEN and E. T. VAINIO)

SCHALEKAMP, M. A. D. H. Med.Cand. — Anat.-Embryol. Lab., Free Calvinistic Univ., Pr. Hendriklaan 27, AMSTERDAM Z., Holland

SCHECHTMAN, A. M. A.B., Ph.D., F.I.I.E., Prof. — Dept. of Zool., Univ., of Calif., LOS ANGELES 24, Cal., U.S.A.

SCHEIB (PFLEGER), Mrs. D. Dr. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Aspects histochimiques (lipides) de la différenciation sexuelle des gonades; lois du développement normal et en culture. *Gallus gallus (Aves)*

SCHENK, R. Dr.med., Prof. — Anat. Inst. der Univ., Pestalozzistr. 20, BASEL, Schweiz

SCHINCKEL, P. G. B.V.Sc. — Div. of Animal Health and Production, C.S.I.R.O., Sheep Biol. Lab., Great Western Highway, (P.O. Box 144 Parramatta), PROSPECT, N.S.W., Australia

a. Pre-natal development and organization of the hair follicle population. *Ovis* spec. *(Artiodactyla)*
b. Mitotic activity and fibre growth. *(Mammalia)*

SCHJEIDE, O. A. Ph.D. — Atomic Energy Project, Univ. of California, LOS ANGELES, Calif., U.S.A.

SCHLESINGER, A. B. B.A., M.S., Ph.D. — Dept. of Biol., School of Med., The Creighton Univ., OMAHA, Nebraska, U.S.A.

a. Physical and chemical nature of yolk. *(Aves)*
b. Mechanisms of growth of the marginal blastoderm. *Gallus* spec. *(Aves)*
c. Differentiation capacities of middle ear mesenchyme in vitro and as chorio-allantoic grafts. *Rattus norvegicus (Rodentia)*

SCHMIDT, A. J. B.A., M.S., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.

a. The hormonal influences on regenerating systems. *Triturus viridescens (Urodela)*
b. The chemistry of regenerating systems. *Triturus viridescens (Urodela)*

SCHNEIDER, D. Dr.rer.nat. — Zool. Inst. der Univ., Luisenstr. 14, MÜNCHEN, Deutschland

a. Entwicklungsphysiologie des Phototropismus.
b. Bildung des Integuments.
c. Regeneration.
d. Polymorphismus. *Bugula avicularia (Gymnolaemata, Bryozoa ectoprocta)*
e. Wachstum von Kalkkristallen im Integument. *(Bryozoa stenolaemata et gymnolaemata)*

SCHNETTER, M. Dr.phil. — Naturkunde-Museum, Gerberau 32, FREIBURG i. Brsg., Deutschland

SCHOELLER, Miss J. Lic. ès Sci. — Lab. de Zool., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE, Gironde, France

a. Facteurs de la différenciation des disques imaginaux de la tête. *(Calliphora* spec., *Sarcophaga* spec. *(Diptera)*

b. Formation de la tête imaginale. *Calliphora* spec. *(Diptera)*

SCHOLTEN, F. C. — Anat.-Embryol. Lab., Free Calvinistic Univ., Pr. Henriklaan 27, AMSTERDAM Z., Holland

SCHOTT, Miss J. Lic. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France

a. Morphogénèse et physiologie embryonnaire des glandes endocrines. *(Selachii; Teleostei)* (en collaboration avec J. H. VIVIEN et Miss D. HAY)

b. Analyse de l'entrée en jeu des correlations hypothalamo-pituitaires par la méthode de greffes hypophysaires. *Rana temporaria, Triturus cristatus, T. marmoratus (Amphibia)*

SCHOTTÉ, O. E. Dr., M.I.I.E., Prof. — Dept. of Biol., Amherst Coll., AMHERST, Mass., U.S.A.

SCHOWING, J. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Recherche des inducteurs céphaliques. Leur action sur la morphogenèse du crâne. *Gallus gallus (Aves)*

SCHREIBER, B. M.I.I.E., Prof. — Ist. di Zool. e Anat. comp., Università di Parma, PARMA, Italia

a. The action of organ extracts upon the proliferative activity of homologous organs cultivated in vitro.

SCHREIBER, G. Ph.D., Prof., Full Member Acad. Brasil. de Cienc. — Inst. de Biol., Fac. Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brazil

a. Quantitative cytology: nuclear size and number of "nucleolar units". *Bufo* spec. *(Anura), Mus rattus (Rodentia)*

b. Intersexuality. *Bothrops insularis (Ophidia)* (in collaboration with A. HOGE, São Paulo and H. BELLUOMINI, São Paulo)

SCHRÖDER, R. K. P. Dr. Med. — Anat. Inst. der Univ. Hamburg, Schottmüllerstr. 1, HAMBURG 20, Deutschland

SCHWANDER, J. — Lab. de Physiol. Génér., 30 Rue Sainte-Cathérine, NANCY, France

a. Recherches expérimentales sur la chronologie du développement biochimique au niveau de l'encéphale. *Gallus domesticus (Aves)* (en collaboration avec J. F. GAYET)

SCHWARTZ, V. Dr., Prof. — Zool. Inst. der Univ., Hölderlinstr. 12, TÜBINGEN, Deutschland

a. Ontogenese des Flügelmusters. *Plodia* spec. *(Lepidoptera)*

b. Entwicklungsphysiologie. *(Ciliata)*

SEDRA, S. N. B.Sc., M.Sc., Ph.D., F.Z.S. — Dept. of Zool., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt.

a. Stages in normal development. *Bufo regularis (Anura)* (in collaboration with M. I. MICHAEL)

b. The development of the nasal capsules. *Bufo regularis (Anura)* (in collaboration with M. I. MICHAEL)
c. Behaviour of egg laying. *Rana fusca, Bufa regularis (Anura)*

SEGAL, S. J. M.S., Ph.D., M.I.I.E. — Population Council, Rockefeller Inst. for Med. Research, 66th St. and York Ave., NEW YORK 21, N.Y., U.S.A.

SEIDEL, F. Dr.Phil., o.Prof. — Zool. Inst. der Univ., Ketzerbach 63, (16) MARBURG/Lahn, Deutschland

SEKIGUCHI, K. Ph.D. — Inst. of Zool., Univ., of Education, Otsuka-Kubomachi 24, Bunkyoku, TOKYO, Japan
a. Regulation in the developing egg. *Tachypleus tridentatus (Xiphosura)* (in collaboration with H. OKA)

SELMAN, G. G. B.Sc., Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland
a. Some measurements of morphogenetic forces and the mechanical properties of the tissue concerned. *(Amphibia)*
b. Study of certain features of developing embryos using electronmicrographs. *(Diptera), (Amphibia)* (in collaboration with C. H. WADDINGTON and Miss M. M. PERRY)
c. Immuno-electrophoretic studies of proteins from embryos. *Triturus alpestris (Urodela)*

SEMBRAT, K. Ph.D., D.Sc., Prof. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. Descriptive and experimental embryology. *Sagartia leucolena (Anthozoa)*
b. Localization of the primary gonocytes in the early gastrula. *(Amphibia)*
c. The morphogenetical functions of the thyroid gland and hypophysis. *(Pisces, Amphibia, Reptilia, Aves)*
d. Regulation and regeneration of the primary optic vesicle. *Triturus* spec. *(Urodela)*

SEMBRATOWA, Mrs. Z. OPOCZYŃSKA M.D., Prof. — Zakład Histol. i Embryol., Akad. Medycznej, Chalubińskiego 6a, WROCŁAW, Poland

SENGEL, Miss C. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. te Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Mise au point d'une technique de culture in vitro d'organes et de tissus en voie de régénération, en adaptant la méthode de Et. C. Wolff et K. Haffen. *Dugesia lugubris (Turbellaria)*

SENGEL, Ph. Dr. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Pigmentation de la peau d'embryon cultivée in vitro sur milieux naturels et synthétiques. *Gallus gallus (Aves)*
b. Analyse in vitro des rôles du derme et de l'épiderme dans la différenciation des germes plumaires chez l'embryon. *Gallus gallus (Aves)*
c. Etude de l'action de divers extraits d'organes sur la différenciation et la croissance de la peau et des germes plumaires. *Gallus gallus (Aves)*

SENO, T. — Dept. of Anat., School of Med., Gunma Univ., MAEBASHI, Japan
a. Origin of the ventral body-wall. *Gallus domesticus (Aves)*

b. Heterotransplantation and the problem of tolerance. *(Aves)*
c. Changes of ultrastructure during embryonic induction. *(Aves), (Mammalia)*

SETOGUTI, T. Dr.Med. — Anat. Dept., Fac. of Med., Nagasaki Univ., NAGASAKI, Japan
a. Acid phosphatase during lens-regeneration. *Triturus pyrrhogaster (Urodela)*
b. Nucleic acids and polysaccharides during lens-regeneration. *Triturus pyrrhogaster (Urodela)*

SETTLE, G. W. A.B., M.D. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Anatomy of club-foot deformities (particularly talipes equinovaris) in the fetus. *Homo sapiens (Primates)*

SEVKET GIZ, F. Dr., Prof. — Zooloji Enstitüsü, Süleymaniye-Müftülük, ISTANBUL, Turkey

SHAFFER, B. M. M.A., Ph.D. — Zool. Dept., Univ. of Cambridge, CAMBRIDGE, England
a. Social behaviour of cells. Cell adhesion. *(Acrasiales)*

SHAFIQ, S. A. M.Sc., D.Ph. — Dept. of Zool., Dacca Univ., DACCA, Pakistan

SHAH, R. V. Ph.D. — Dept. of Zool., Univ. of Baroda, BARODA 2, India
a. An ameliorated vital staining technique. *(Amphibia* and possibly other *Vertebrata)*

SHANER, R. F. Ph.D., F.R.S.C., Prof. — Dept. of Anat., Med. School, Univ. of Alberta, EDMONTON, Alberta, Canada
a. A study of abnormal hearts in embryos corresponding to the third month of human development. *Sus scrofa (Artiodactyla)*
b. Study of a collection of abnormal embryos of an age corresponding to the third month of human development with the aim of throwing light on the development of various human abnormalities. *Sus scrofa (Artiodactyla)*
c. Development of abnormal pulmonary and aortic valves.
d. Developmental basis of anomalies of the pulmonary veins.

SHAPIRO, H. B.S., A.M., Ph.D., Prof. — 5800 N. Camac St., PHILADELPHIA 41, Pa., U.S.A.

SHAVER, J. R. A.B., Ph.D. — Zool. Dept., Michigan State Univ., EAST LANSING, Mich., U.S.A.
a. Investigations of specificity of jelly-coat in fertilization (immunology, biochemistry). *Rana clamitans, R. pipiens (Anura)*
b. Transmission of agent of renal carcinoma via egg. *Rana pipiens (Anura)*

SHEN, S. C. Ph.D. — Dept. of Anat., Columbia Univ., 630 West 168th St., NEW YORK 32, N.Y., U.S.A.

SHIINO, S. M. B.Sc., D.Sc. — Zool. Inst., Fac. of Fisheries, Mie Prefectural Univ., TSU-CITY, Mie-Pref., Japan
a. On origin and fate of teloblasts. *Goetice depressus (Brachyura, Decapoda), Eupagurus samuelis (Anomura, Decapoda), Spirontocaris rectirostris (Macrura, Decapoda)*

SHIN-IKÉ, T. — Osaka Dental Coll., HIRAKA CITY, Osaka-Pref., Japan
a. Factors in the morphogenesis of the pronephric system. *Triturus pyrrhogaster (Urodela)*

SHIOMI, T. — Div. of Genet., National Inst. of Radiol. Sci., Kurosunacho, CHIBA, Japan
a. Studies on the hereditary lethals. *Drosophila* spec. *(Diptera)*
b. Radiation effects on development. *Drosophila* spec. *(Diptera)*

SHORT, B. F. M.Agr.Sc., Ph.D. — Div. of Animal Health and Production, C.S.I.R.O., Sheep Biol. Lab., Great Western Highway, (P.O. Box 144, Parramatta), PROSPECT, N.S.W., Australia
a. Response to homologous antigens. *Mus musculus, Ovis* spec. *(Mammalia)*
b. Morphogenesis of wool follicles and fibres. *Ovis* spec. *(Artiodactyla)*

SHULOV, A. Dr.Sc. — Dept. of Zool., Hebrew Univ., JERUSALEM, Israel
a. Ecological conditions of development of eggs. Artificially induced interruption of development (eggs) (The changes in yearly development cycles under influence of dryness or/and humidity). *Calliptamus* spec., *Schistocerca gregaria, Locusta migratoria migratorioides, Nomadacris septemfasciata (Orthoptera)*
b. Protease of eggs. Correlation of the morphological changes in the embryo with appearance of protease. *Schistocerca gregaria, Locusta migratoria migratorioides (Orthoptera)*
c. Structure of the chorion and the micropyle. *Tmethis pulchripennis asiaticus (Orthoptera)*

SHUTE, C. C. D. M.A., M.D. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

SIGOT, M. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Etude biochimique du développement de l'intestin; constitution et fonctionnement enzymatique. *Gallus* spec. *(Aves)*
b. Etude biochimique de la différenciation sexuelle. *(Aves)*

SIGOT (LUIZARD), Mrs. M. F. Lic. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Culture de cellules cancéreuses sur des organes embryonnaires de poulet explantés in vitro. *Mus muculus, Rattus rattus, Homo sapiens (Mammalia)*

SILÉN, L. K. P. Fil.Dr., Prof. — Zootom. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden
a. Development of the nervous system. *(Enteropneusta)*

SILVER, P. H. S. Ph.D. — Anat. Dept., Middlesex Hosp., Med. School, LONDON W. 1, England

SIMON, Mrs. D. Dr. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Explantation in vitro de jeunes embryons, localisation et migration des cellules germinales aux premiers stades du développement. *Gallus* spec. *(Aves)*

SINCLAIR, J. G. B.S., M.S., Ph.D. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.
a. Anterior cerebral nerve plexus in adult and fetus. *Tursiops truncatus, Oryctolagus cuniculus, Mus musculus, Homo sapiens (Mammalia)*

b. Continued study of developmental anomalies. Brain. Heart. *Mus musculus, Homo sapiens (Mammalia)*
c. Continued study of transplacental effects of urethan. *Mus musculus (Rodentia)*
d. Developmental pattern and mechanism of iris and ciliary body. *Tursiops truncatus, Oryctolagus cuniculus, Mus musculus, Homo sapiens (Mammalia)*
e. Development of head structure with special attention to cranial nerves, blowhole and ear. *Prodelphinius coerulealbus (Cetaceae)*

SINGER, M. B.S., M.A., Ph.D., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y., U.S.A.
a. Introduction of chemicals directly into developing regenerates and tissues by means of a method of microinfusion. *Triturus viridescens viridescens (Urodela)*
b. Electron microscopic studies of regenerates. *Ambystoma punctatum (Urodela)*
c. The induction of regeneration in postmetamorphic animals by increase in nerve number. *(Anura)*

SINGER, R. M.B., Ch.B., F.R.A.I. — Anat. Dept., Med. School, Univ. of Cape Town, MOWBRAY, C.P., South Africa

SINHA, A. K. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
a. Determination of regenerative potencies. *Hydra* spec. *(Coelenterata)*
b. Determination and individuation. *Hydra* spec. *(Coelenterata)* (in collaboration with S. MOOKERJEE, S. SANYAL and S. N. NAGARAJAN)

SIRAKAMI, K. I. M.A., Ph.D. — Biol. Dept., Yamanashi Univ., KÔFU, Japan

SIRLIN, J. L. Dr.Nat.Sci. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road. EDINBURGH 9, Scotland
a. Differentiation of protein and nucleic acids in embryonic cells. *(Diptera, Amphibia, Aves)*

SKREB, N. M.D., D.Sc. — Inst. de Biol., Fac. de Méd., Salata, ZAGREB, Yougoslavie

SLABÝ, O. MUDr., RNDr., Dr.Sci., Prof. — Inst. of Histol., and Embryol., Fac. of Med., Charles Univ., Karlovarská ul. 48, PLZEŇ, Czechoslovakia
a. The development of the skull. *(Amniota,* including *Homo sapiens)*
b. The development of the limbs. *(Amniota,* including *Homo sapiens)*
c. The development of the nasal cavity. *(Amniota,* including *Homo sapiens)*

SLÁDEČEK, F. RNDr., C.Sc. — Dept. of Gener. and Exper. Zool., Zool Inst. of Charles Univ. Viničná 7, PRAHA II, Czechoslovakia
a. Induction with haploid inductors in diploid hosts and vice versa. *Siredon mexicanum (Urodela)*
b. Transplantation of nuclei and cytoplasmic components. *(Amphibia)* (in collaboration with A. ROMANOVSKÝ and J. NEDVÍDEK)

SLIJPER, E. J. Dr., Prof. — Zool. Lab. der Univ., Plantage Doklaan 44, AMSTERDAM C., Holland
a. The embryonic bloodcirculation (ductus Botalli, ductus Arantii etc.). *(Cetacea)*

SLÍPKA, J. MUDr., RNDr., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia

a. The development of the branchial region. *(Amniota,* including *Homo sapiens)*
b. The early development of the thyroid gland. *(Amniota,* including *Homo sapiens)*

SMET, W. M. A. de Lic. Zool. Sci. — Kasteellei 57, BRASSCHAAT, Belgium
— Inst. de Zool., Univ., de Louvain, 71 Rue de Namur, LOUVAIN

SMITHBERG, M. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Florida, U.S.A.
a. Teratology.

SMRECZYŃSKI, S. Ph.D. — Zool. Dept. of the Jagiellonian Univ., St. Anne 6, KRAKOW, Poland
(no embryological work in progress)

SNELLEN, H. A. Med.Dr., Prof. — Anat.-Embryol. Lab. of the Univ., Fac. of Med., Wassenaarseweg, Boerhaavekwartier, LEIDEN, Holland
a. Heart and vessels in congenital malformations. *Homo sapiens (Primates)* (in collaboration with J. DANKMEIJER, Miss A. DEKKER and Miss H. C. van INGEN)

SNOOK, T. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Univ. of North Dakota, GRAND FORKS, N.Dak., U.S.A.

SOBEY, W. R. Ph.D. — C.S.I.R.O. Anim. Genet. Sect., c/o Dept. of Zool., Univ. of Sydney, SYDNEY, N.S.W., Australia

SPIEGEL, M. B.S., Ph.D. — Dept. of Zool., Dartmouth Coll., HANOVER, New Hampshire, U.S.A.
a. Protein changes in development. *Arbacia punctulata (Echinoidea), Rana pipiens (Anura)*

SPIRITO, A. Dott., M.I.I.E., Prof. — Ist. di Biol. gen., Fac. di Med., S. Pietro, PERUGIA, Italia
a. Origine e natura dei tumori. *Bufo* spec. *(Anura)*

SPOFFORD, W. R. Ph.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.
a. Induction and determination in the neural plate. *Ambystoma maculatum (Urodela)*
b. Experimental neurogenesis. *Ambystoma maculatum (Urodela)*

SPRATT, N. T., Jr. A.B., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Coll. of Sci., Lit. and Arts. Univ. of Minnesota, MINNEAPOLIS 14, Minn., 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)* *rata)*
c. Regeneration. *Planaria* spec. *(Turbellaria), Tubularia* spec. *(Coelente-*
d. Cytological study of the developmental center (organizer). *Gallus domesticus (Aves)*
e. Analysis of mechanism of morphogenetic movements by time-lapse cinematography. *Gallus domesticus (Aves)*
f. Analysis of dynamic population patterns (Pattern formation by free-swimming, ciliated and flagellated organisms). *Tetrahymena* spec., *Euglena* spec. *(Protozoa), Arbacia punctulata (Echinoidea)*

SRINIVASACHAR, H. R. B.Sc., M.Sc., Ph.D. — Dept. of Zool., Central College, BANGALORE 1, India
a. Development of chondrocranium — basis for classification and evolution. *(Pisces)*
b. Development of osteocranium — centres of ossification, etc. *(Siluroidea)*
c. Skull development. *Ploceus manyar flaviceps (Passeriformes, Aves)*

SRIVASTAVA, M. D. L. D.Sc., F.N.A.Sc., Prof. — Dept. of Zool., Allahabad Univ., ALLAHABAD, India
(no embryological work in progress)

STAGNI, Miss A. Dr. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
a. Regeneration and sex differentiation. *(Hydroidea)*
b. Regeneration, origin of germ-cells and gametogenesis. *Spirorbis pagenstecheri (Serpulidae, Polychaeta)*

STAM, F. — Anat.-Embryol. Lab., Free Calvinistic Univ., Pr. Hendriklaan 27, AMSTERDAM Z., Holland

STANGAARD, B. C. A.B., M.S. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.
a. Morphogenesis and function in embryonic kidney. *Gallus domesticus (Aves)*

STARCK, D. Dr.med., F.I.I.E., o.Prof. — Dr. Senckenberg. Anat. Inst., Med. Fak. der Univ., Ludwig Rehnstr. 14, FRANKFURT/Main-Süd, Deutschland

STÄRK, O. J. Dr.rer.nat. — Zool. Inst. der Univ., Katharinenstr. 20, FREIBURG i.Brsg., Deutschland

STEBBINS, G. L. Dr., Prof. — Dept. of Genet., Univ. of California, DAVIS, Cal., U.S.A.

STEDING, G. cand.med. — Anat. Inst. der Univ., Burgstr. 51, GÖTTINGEN, Deutschland
a. Experimente zur Entwicklung des Rückenmarkes (Umdrehung dorsoventral). *Gallus gallus (Aves)*

STEFAN, Miss Y. Lic. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Morphogénèse du tractus génital et des gonades. *Emys leprosa (Chelonia), (Ophidia)* (en collaboration avec J. H. VIVIEN)

STEFANELLI, A. Dr., F.I.I.E., Prof.ord. — Ist. di Anat. comp. "G. B. Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia
a. Histogenetic determination and differentiation of nervous cells. *(Teleostei, Amphibia, Aves)*
b. Degeneration and regeneration of nervous cells. *(Teleostei, Amphibia, Aves)*
c. Social behaviour of cultivated cells. *(Amphibia, Aves)*
d. Correlated and partial movements of spermatozoa. *(Amphibia, Aves)*
e. Cytochemistry of development and regeneration. *(Amphibia, Aves)*
f. Antimitotic action on i n v i t r o explanted organs. *Gallus domesticus (Aves)*
g. Factors of nervous fibre orientation i n v i t r o. *Gallus domesticus, Coturnix coturnix japonica (Aves)*

STEIN, Miss K. F. A.B., M.S., Ph.D. — Dept. of Zool., Mount Holyoke Coll., SOUTH HADLEY, Mass., U.S.A.
a. Development of an abnormal homozygote due to the looptail gene (Lp). *Mus musculus (Rodentia)*

b. Histochemical study of normal development and of the abnormal homozygote LpLp. *Mus musculus (Rodentia)*
c. Study of two mutations in the waltzer-shaker group. *Mus musculus (Rodentia)*

STEINBERG, M. S. B.A., M.A., Ph.D. — Dept. of Biol., The Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE 5, Md., U.S.A.
a. Chemical bonds between embryonic cells. Various spp. *(Amphibia)*
b. Mechanism of selective adhesion (cell affinities) in embryonic cells. *Gallus domesticus (Aves)*

STEINER, H. Dr.Phil., Prof. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz
a. Die Feinstruktur der Feder nach elektronenmikroskopischen Untersuchungen. (Aves)

STEINITZ, H. Ph.D. — Dept. of Zool., Hebrew Univ., JERUSALEM, Israel
a. Regeneration of retina from pigment epithelium. *(Urodela)*
b. Lens regeneration from iris. *(Urodela)*
c. Histogenesis of retina in normal development and regeneration. *(Amphibia)*

STENGER (HAFFEN), Mrs. K. E. Dr. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Recherches sur la différenciation et l'intersexualité in vitro des gonades embryonnaires. *(Aves)* (en collaboration avec Et. C. WOLFF)
b. Recherches sur les besoins nutritifs des gonades embryonnaires en culture in vitro. *(Aves)*

STÉPHAN, Fr. Dr. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Formation du système vasculaire extraembryonnaire et son extension. Développement du coeur et des gros troncs artériels de l'embryon. *Gallus gallus (Aves)*
b. Etude expérimentale des anomalies et des suppléances vasculaires dans l'aire extraembryonnaire et l'embryon. *Gallus gallus (Aves)*

STÉPHAN (DUBOIS), Mrs. Fr. Dr. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Migration et différenciation des cellules de régénération. *(Planariidae* d'eau douce, *Oligochaeta microdrila, Polychaeta errantia)*

STEPHENSON, N. G. M.Sc., Ph.D. — Zool. Dept., Univ. of Sydney, SYDNEY, N.S.W., Australia

STEVENS, L. Ph.D. — Roscoe B. Jackson Memorial Lab., BAR HARBOR, Me., U.S.A.
a. Histogenesis of testicular teratoma (strain 129). *Mus musculus (Rodentia)*
b. Study of a genetic defect affecting blood formation, body size and tail morphogenesis. *Mus musculus (Rodentia)*

STINSON, B. D. B.S., M.S., Ph.D. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J., U.S.A.
a. The influence of thyroid function on the radiosensitivity of the regenerating forelimb of larvae. *Ambystoma opacum (Urodela)*

b. The influence of cysteine on the suppression of regenerating capacity in larvae by X-irradiation. *Desmognathus fuscus, Ambystoma opacum, A. tigrinum, A. maculatum (Urodela)*
c. An experimental analysis of X-ray-induced digit regression in intact forelimbs of the adult animal. *Triturus viridescens (Urodela)*
d. Regeneration of X-irradiated limb stumps following implantation of normal tissues (adult). *Triturus viridescens (Urodela)*

STOCK, A D.Phil., Ph.D. — Dept. of Zool., Univ. of New England, ARMIDALE, N.S.W., Australia
a. Regeneration and the endocrine system. *Blattella germanica (Dictyoptera, Insecta)* (in collaboration with A. F. O'FARRELL and Miss J. MORGAN)

STOCKARD, A. H. Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich., U.S.A.

STOLL, R. Dr. en Méd., Dr. ès Sci., Prof. — Lab. d'Histol., Fac. de Méd., 1 Place de la Victoire, BORDEAUX, France
a. Développement de la thyroide de l'embryon. *Gallus domesticus (Aves)*
b. Différenciation phénotypique du sexe: rôle du testicule embryonnaire. *Gallus domesticus (Aves)*

STONE, L. S. Ph.D., F.I.E., Prof. — Anat. Dept., School of Med., Yale Univ., 333 Cedar St., NEW HAVEN 11, Conn., U.S.A.
— Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.
a. Regeneration of retina, iris and lens from retina pigment cells. *(Urodela)*
b. Factors controlling the inhibition and release of lens regeneration. *(Urodela)*
c. Tissue culture studies of lens regeneration from the iris. *(Urodela)*
d. Tissue culture studies of retina pigment cells. *(Urodela; Mammalia)*
e. Development of vision in transplanted eyes. *(Urodela)*

STOUT, Miss V. M. M.Sc., Ph.D. — Dept. of Zool., Canterbury Univ., CHRISTCHURCH, New Zealand
a. Descriptive embryology. *Lepidurus apus (Notostraca, Crustacea)*
b. Descriptive embryology. *Daphnia magna (Cladocera, Crustacea)*

STRAHAN, R. M.Sc. — Dept. of Zool., Univ. of Hong Kong, HONG KONG
a. Development and morphology. *(Cyclostomata)*

STRAUSS, F .M.D. — Anat. Inst., Bühlstr. 26, BERN, Schweiz
a. The oviduct during the passage of the egg. *(Mammalia)*
b. Comparative implantation. *(Mammalia)*

STROËVA, Miss O. G. Cand. Biol. Sci. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Analysis of the capacity of the eyes of adult animals to regenerate the retina. *Bombina bombina (Anura), Rattus norvegicus (Rodentia)*
b. Analysis of the conditions of embryonic segregation of the eye rudiment. *Rattus norvegicus (Rodentia)*
c. The action of certain substances on the capacity of parts of the eye of transformations, especially of pigment epithelium into retina, in tadpoles. *Rana arvalis, Pelobates fuscus* etc. *(Anura)*

STRUDEL, G. Dr. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), 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)*

STUCHLY, Z. Dr., Prof. — Zakład Biol. Ogólnej, Akad. Med., ul. Bujwida 9, WROCŁAW, Poland
a. Influence of blockage of the reticulo-endothelial system on metamorphosis. *(Amphibia)*

STULTZ, W. A. B.A., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Vermont, BURLINGTON, Vt., U.S.A.
a. Studies on the structure and function of the spinal cord, trunk and limbs following removal or transplantation of central nervous tissue. *Ambystoma punctatum (Urodela)*
b. Limb development and function following reciprocal transplantations of brachial and lumbo-sacral cord segments. *Ambystoma punctatum (Urodela)*
c. A comparison of the effects following reversal of the brachial and lumbo-sacral cord segments. *Ambystoma punctatum (Urodela)*
d. The time of determination of the antero-posterior axis of the hind limb. *Ambystoma punctatum (Urodela)*

SUBTELNY, S. Dr. — Inst. for Cancer Research, 7701 Burholme Avenue, PHILADELPHIA 11, Pa., U.S.A.
a. Transplantation of embryonic nuclei into activated body cavity eggs. *Rana pipiens (Anura)* (in collaboration with Th. J. KING)

SUGINO, H. D.Sc., Prof. — Biol. Lab., Osaka Liberal Arts Univ., Tennoji-ku, OSAKA, Japan
a. Transplantation experiments. *Dugesia gonocephala (Tricladidea)*

SUGIYAMA, M. M.A., D.Sc., M.I.I.E. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, Japan
a. Physiological studies on fertilization and artificial parthenogenesis. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)* (in collaboration with M. ISHIKAWA)

SUKIRNA, M. Prof. — Fakultas Kedokteran, Universitas Indonesia, Bag. Ilmu Djaringan Tubuh, Salemba no. 6, DJAKARTA, Indonesia
a. The physiology of the female reproductive system (menstrual cycle and gestation). *Macacus cynomolgus (Primates)*

SULLIVAN, G. E. M.Sc. — Dept. of Histol. and Embryol., Univ., of Sydney, SYDNEY, N.S.W., Australia
a. Effect of paralysis with decamethonium on the morphogenesis of the wing musculature. *Gallus* spec. *(Aves)*
b. Effect of removal of insertions on the development of the musculature of te wing. *Gallus* spec. *(Aves)*

SUMIŃSKI, E. H. M.V.Sc. — Lab. of Histol. and Embryol., Veter. Fac., ul. Grochowska 272, WARSZAWA, Poland
a. Descriptive and physiological studies of development. *Salamandra maculosa (Urodela)*

SUNDELL, L.-E. Fil.mag. — Inst. of Zoophysiol.., Univ. of Uppsala, UPPSALA, Sweden

a. Physiological and chemical studies in yolk. *(Pisces, Amphibia)*

SUNDELL (THORSELL), Mrs. G. Fil.Kand. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

a. The primary sex rate. *(Mammalia)* (in collaboration with P. E. LINDAHL)

SWANN, M. M. M.A., Ph.D., Prof. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Fertilization and cleavage. *(Echinoidea)*
b. Division and growth in micro-organisms.

SWARTZ, G. E. B.A., M.A., Ph.D. — Dept. of Biol., Univ. of Buffalo, BUFFALO 14, N.Y., U.S.A.

a. Descriptive embryology, experimental embryology and regeneration. *Cricetus auratus (Rodentia)*

SZAŃKOWSKA, Z. M.V.Sc. — Lab. of Histol. and Embryol., Veter. Fac., ul. Grochowska 272, WARSZAWA, Poland

a. Histochemical aspects of oogenesis. *Salamandra maculosa (Urodela)*

SZARSKI, K. W. Ph.D. — Zakład Anat. Porównawczej, Inst. Zool. Uniw., ul. Sienkiewicza 21, WROCŁAW, Poland

SZÉKELY, G. M.D. — Dept. of Anat., Univ. Med. School, Dischka u 5, PÉCS, Hungary

a. Analysis of ambulatory movement by transplantation of cervical or lumbal cord segments and limbs into midthoracic level. *Pleurodeles Waltlii (Urodela)*
b. Reflexes and behaviour-patterns elicited by transplanted supernumerary extremities (wing or leg). *Gallus domesticus (Aves)* (in collaboration with J. SZENTÁGOTHAI)

SZENTÁGOTHAI, J. M.D., Prof. — Dept. of Anat., Univ. Med. School, Dischka u 5, PÉCS, Hungary

a. Reflexes and behaviour-patterns elicited by transplanted supernumerary extremities (wing or leg). *Gallus domesticus (Aves)* (in collaboration with G. SZÉKELY)

SZUBIŃSKA (KILARSKA), Mrs. B. S. — Zakład Anat. Porównawczej U.J. im H. Hoyera, św. Anny 6, KRAKOW, Poland

a. Yolk. *(Teleostei)*

TAHARA, Y. — Lab. of Morphol., Osaka Lib. Arts Univ., IKEDA, Osaka-Pref., Japan

TAHMISIAN, T. N. B.A., M.S., Ph.D. — Argonne National Lab., P.O. Box 299, LEMONT, Ill., U.S.A.

a. Effects of ionizing irradiations on tissue differentiation and metabolism in embryos. *Melanoplus diff. differentialis (Orthoptera)*
b. Dose rate effect upon teratogenesis. *Melanoplus diff. differentialis (Orthothoptera)*
c. Organelle induction and differentiation in spermatogenesis as effected by X irradiation. *Melanoplus diff. differentialis (Orthoptera)*

TAKAHASHI, H. M.Sc. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan

a. The action of steroid hormones on sex differentiation. *Rana* spec., *Hyla* spec. *(Anura)*
b. Malformation of limbs caused by estrogenic hormone. *Bufo* spec. *(Anura)*

TAKAMI, T. — Dept. of Physiol., Sericult. Exper. Stat., Koenji, Suginami-ku, TOKYO, Japan

a. Embryology with special reference to the dormancy and activation of the hibernating egg. *Bombyx mori (Lepidoptera)*
b. Tissue culture and in vitro studies on the embryo, yolk cell and other egg components. *Bombyx mori (Lepidoptera)*

TAKATA, Miss C. B.Sc., M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

TAKATA, K. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Purification of the mesoderm-inducing factor of the bone-marrow, testing its effects in solution. *(Urodela, Mammalia)* (in collaboration with T. YAMADA)
b. Physiology and biochemistry of microsomal ribonucleoproteins in germinating bean seeds. *(Leguminosae)* (in collaboration with Y. OOTA)

TAKAYA, H. Ph.D., M.I.I.E., Prof. — Biol. Lab., Dept. of Sci., Kônan Univ., Okamoto, KOBE, Japan

a. Regional differentiation of the central nervous system. *Triturus* spec., *Hynobius* spec., *Bufo* spec., *Rana* spec. *(Amphibia)*
b. Production of situs inversus viscerum. *Triturus* spec., *Hynobius* spec., *Rana* spec., *Bufo* spec. *(Amphibia)*
c. Thermal influence upon the development of the early embryo. *Triturus* spec., *Hynobius* spec., *Bufo* spec., *Rana* spec. *(Amphibia)*
d. Chemical phenocopies. *Drosophila melanogaster (Diptera)* (in collaboration with S. KAJI and I. INOUYE)

TAKEUCHI, K. B.Sc., M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Necessary substances for egg formation and development. *Oryzias latipes (Teleostei)*
b. Studies of hunchback. *Oryzias latipes (Teleostei)*

TAKISAWA, A. B.M., M.D., Prof. — Anat. Inst., Gunma Univ., MAEBASHI, Japan

a. The skeletal muscles in the course of metamorphosis. *Bufo vulgaris (Anura), Mus musculus (Mammalia)*
b. Histochemical study of the neurons during development. *Bufo vulgaris (Anura)*

TALBERT, G. B. B.S., M.A., Ph.D. — Dept. of Anat., Coll. of Med., State Univ. of New York, 450 Clarkson Ave., BROOKLYN 3, N.Y., U.S.A.

TARDENT, P. Dr. — Stazione Zool., NAPOLI, Italia

TARTAR, V. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of Washington, SEATTLE 5, Wash., U.S.A.

a. Relation of amount of nucleus to the rate of regeneration. *Stentor coeruleus (Ciliata)*
b. Production of chimeras. *Stentor* spp. *(Ciliata)*

TAVARES DE SOUSA, A. Dr., Prof. — Inst. de Histol. e Embriol. da Fac. de Med., COIMBRA, Portugal
(no embryological work in progress)

TAYLOR, A. C. Dr., M.I.I.E., Prof. — Rockefeller Inst. for Med. Research, 66th St. and York Ave., NEW YORK 21, N.Y., U.S.A.

TEIXEIRA, Mrs. I. — Inst. de Histol. e Embriol., Fac. de Med., Avenida 28 de Maio, LISBOA, Portugal
(no embryological work in progress)

TENCER, Miss R. Lic. en Sci. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
a. Synthesis of DNA. *(Aves)*
b. Neural induction and precytolysis. *Ambystoma* spec. *(Urodela)*
c. Metabolism during gastrulation. *Ambystoma* spec. *(Urodela)*
d. Metabolism during development. *Ambystoma* spec., *Pleurodeles* spec. *(Urodela)*, *Bufo* spec., *Rana* spec. *(Anura)*

TERAMURA, Miss Y. M.A. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
a. Removal of the chorion from eggs. *Oryzias latipes (Teleostei)*

TESTA, I. Dr. — Inst. für Humangenetik der Univ. Münster, Waldeyerstr. 27, MÜNSTER (Westf.), Deutschland
a. Ueber die Regulation der halbseitigen Organanlagen bei künstlich erzeugten Zwillingen. *Triturus alpestris, T. taeniatus (Urodela)*
b. Die Frage der Entstehung von eineiigen Zwillingen, bzw. ihr normales oder anormales Verhalten. *Homo sapiens (Primates)*

TE WINKEL, Miss L. E. A.B., A.M., Ph.D. — Dept. of Zool., Smith Coll., NORTHAMPTON, Mass., U.S.A.
a. Histology of nidamental gland and ovary at different periods of gestation. *Mustelus canis (Selachii)*

THIEBOLD, J. J. Dr. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Morphogénèse des gonades et du tractus génital. *(Selachii; Teleostei)* (en collaboration avec J. H. VIVIEN et Th. MOHSEN)

THILLARD, Miss M. J. Lic., Ing.Chim. — Lab. de Biol. Anim., Pavillon Curie, Univ. de Paris, 12 Rue Cuvier, PARIS Ve, France
a. Growth of nerve fibres. *Gallus domesticus (Aves)*
b. Development of epiphysis. *Gallus domesticus (Aves)*

THOMASON, Miss D. M.A., Ph.D. — Tissue Culture Lab., Christie Hosp. & Holt Radium Inst., Withington, MANCHESTER 20, England
a. The effects of ionizing radiations on developing embryos. *Xenopus laevis (Anura)*
b. Calcium metabolism in early embryonic development. *Xenopus laevis (Anura)*

THOMPSON, A. P. D. B.Sc., M.B., Ch.B. — Dept. of Anat., The Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England
(no embryological work in progress)

THOMPSON, T. E. B.Sc. — Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales

THORNTON, C. S. A.B., M.A., Ph.D. — Kenyon College, GAMBIER, Ohio U.S.A.
a. Analysis of the manner in which transplanted body skin inhibits limb regeneration. *Ambystoma tigrinum, A. talpoideum (Urodela)*
b. Analysis of relation of nerves to apical epidermal cap in limb regeneration. *Ambystoma tigrinum, A. talpoideum (Urodela)*
c. Analysis of histogenesis in regenerating aneurogenic limbs. *Taricha granulosa (Urodela)*

THUNQVIST, L.-O. Fil.kand. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

a. The mechanism of agglutination of spermatozoa. *(Mammalia)* (in collaboration with P. E. LINDAHL, E. NORDLING, R. BRATTSAND, N.-O. BODIN and G. UHLIN)

THURMOND, W. A.B., M.A., Ph.D. — Biol. Sci. Dept., Calif. State Polytechnic College, SAN LUIS OBISPO, Cal., U.S.A.

a. Physiogenesis of the adeno- and neurohypophysial primordia. *Hyla regilla (Anura)*

TIEDEMANN, H. Dr.med., Dr.rer.nat., Dr.habil. — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland

a. Chemische Physiologie der Entwicklung. *(Amphibia)*

TIEDEMANN (WAECHTER), Mrs. H. Dr.rer.nat. — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland

a. Chemische Physiologie der Entwicklung. *(Amphibia)*

TIMMERMANS, Miss L. P. M. M.Sc. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland

a. Cytochemistry and physiology of shell secretion. *Limnaea stagnalis (Gastropoda)*

TISNA-AMIDJAJA, D. A. Dr.rer.nat. — Dept. of Chemistry and Biol., Inst. of Technol., Djl. Ganeça 10, BANDUNG, Indonesia

a. Standard food and growth curve. *Rhacophorus leucomystax, Bufo melanosticus (Anura)*

b. Hybridization between the striped and non-striped variety. *Rhacophorus leucomystax (Anura)*

TIXIER (VIDAL), Mrs. A. Dr. ès Sci. — Lab. d'Histophysiol., Coll. de France, 4 Avenue Gordon Bennett, PARIS 16e, France

a. Différenciation de la thyroide embryonnaire en culture d'organe (méthode de WOLFF). *Gallus domesticus (Aves)*

b. Apparition de la fonction thyréotrope dans l'hypophyse embryonnaire (étude expérimentale). *Gallus domesticus (Aves)*

c. Autodifférenciation in vitro de la fonction thyréotrope de l'hypophyse embryonnaire. *Gallus domesticus (Aves)*

d. Influence exercée in vitro par divers tissus sur la réponse de la thyroide de l'embryon de 8 jours à l'hypophyse embryonnaire de même âge. *Gallus domesticus (Aves)*

e. Influence d'un abaissement de la température d'incubation sur la thyroide embryonnaire (histologie et biochimie). *Gallus domesticus (Aves)*

TOIT, C. A. du M.Sc., Ph.D., Prof. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, South Africa
(no embryological work in progress)

TOIVONEN, S.I. Ph.D. F.I.I.E., Prof. — Zool. Lab. Univ. of Helsinki, P. Rautatiekatu 13, HELSINKI, Finland

a. The specific action of heterogenous inductors. *Triturus* spec. *(Urodela)*

b. The inductive action of malignant tumors. *Triturus* spec. *(Urodela)* (in collaboration with L. O. SAXÉN)

c. The mechanism of the induction produced by heterogenous inductors. *Triturus* spec. *(Urodela)* (in collaboration with L. O. SAXÉN and E. T. VAINIO)

TOMITA, H. B.Sc., M.A. — Biol. Inst. Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. Melanin formation in color phenotypes. *Oryzias latipes (Teleostei)* (in collaboration with T. YAMAMOTO and T. HISHIDA)

TONDEUR, M. Cand. en Méd. — Lab. d'Anat. et d'Embryol., Fac. de Méd., 97 Rue aux Laines, BRUXELLES, Belgique
a. Imprégnation osmiée des jeunes stades. *(Mammalia)*

TÖNDURY, G. F.I.I.E., Prof. — Anat. Inst. der Univ., Gloriastr. 19, ZÜRICH, Schweiz

TÖRÖK, L. J. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary
a. Investigation of regenerative processes with special consideration of the morphogenetic role of the central nervous system. *Dugesia lugubris, Dendrocoelum lacteum (Turbellaria)*

TORREY, Th. W. A.B., A.M., Ph.D. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.
a. Studies on development of gonads and sexual ducts. *(Mammalia)*
b. Development of nephros. *Homo sapiens (Primates)*

TRACY, H. C. Ph.D., Prof. (Emer.) — Dept. of Anat., Med. School, Univ. of Kansas, LAWRENCE, Kansas, U.S.A.
a. Development of the nervous system in relation to behaviour. *Opsanus tau (Pisces)*
b. Physiological stages in development. *Opsanus tau (Pisces)*

TRAMPUSCH, H. A. L. Ph.D., M.I.I.E. — Div. of exp. Morphol., Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O, Holland
a. Studies aimed to investigate some inductive effects on regenerative blastemata. *Ambystoma mexicanum (Urodela)*
b. Experiments designed to test relations of some inhibitors of embryonic development to the effect of X-rays. *(Urodela; Rodentia)* (in collaboration with J. van der BORDEN)
c. Attempts to analize the differences in regenerative capacity between Amphibia and Mammalia. *Ambystoma* spec. *(Urodela), Mus* spec. *(Rodentia)* (in collaboration with D. J. JOCHEMS)
d. Studies on the mechanism of recovery from the effect of X-rays in regenerates. *Ambystoma mexicanum (Urodela)* (in collaboration with Miss
e. Effect of X-rays on the pattern of nucleic acids in the regenerate. *Ambystoma mexicanum (Urodela)* (in collaboration with C. D. A. VERWOERD)

TRINKAUS, J. P. M.A., Ph.D. — Josiah Willard Gibbs Research Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.
a. Cytodifferentiation. *Fundulus heteroclitus (Teleostei), Gallus domesticus (Aves)*
b. Cell affinities. *Fundulus heteroclitus (Teleostei), Gallus domesticus (Aves)*
c. Mechanism of morphogenetic movements. *Fundulus heteroclitus (Teleostei), Gallus domesticus (Aves)*

TRUSLOVE, Miss G. M. B.Sc., Ph.D. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C. 1, England
a. Developmental genetics of skeletal mutants. *Mus musculus (Rodentia)*

TUCHMAN-DUPLESSIS, H. M.I.I.E., Prof. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Anencéphalie. *Homo sapiens (Primates)*
b. Tératogenèse par bleu trypan, sulfamides hypoglycémiants, antimetabolites. *Rattus* spec. *(Rodentia)*

c. Influences des hormones sur le développement foetal. *Rattus* spec. *(Rodentia)*

TUCKER, R. D.V.M. — Dept. of Veter. Anat. and Parasitol., School of Veter. Sci., Univ. of Queensland, Fairfield Road, Yeerongpilly, BRISBANE, Queensland, Australia

TUFT, P. H. M.A., Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Embryonic growth: cell number, mass, density, uptake and distribution of water. *Rodnius* spec. *(Hemiptera), Brachydanio rerio (Teleostei), Xenopus laevis (Anura)*

TUNG, T. C. Dr., F.I.I.E., Prof. — Lab. of Developm. Physiol., Inst. of Exper. Biol., Acad. Sinica, 320 Yo Yang Road, SHANGHAI, China

TUSQUES, J. M. Dr. en Méd., Dr. ès Sci., Prof. — Lab. d'Histol., Fac. de Méd., 16, Quai Moncousu, NANTES, France
(no embryological work in progress)

TWITTY, V. C. Dr., F.I.I.E., Prof. — Dept. of Biol., Stanford Univ., STANFORD, Cal., U.S.A.

TYLER, A. Ph.D., F.I.I.E., Prof. — Dept. of Embryol., Div. of Biol., Calif. Inst. of Technol., PASADENA 4, Cal., U.S.A.

a. Physiology of fertilization. *(Echinoidea)*
b. Physiology of early development. *(Echinoidea, Polychaeta)*
c. Life-span, motility and metabolism of spermatozoa. *(Echinodermata, Annelida, Mollusca, Aves, Mammalia)*
a. Immuno-embryology. *(Echinodermata* etc.*)*

UBBELS, Miss G. A. M.Sc. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland

a. The role played by the follicle cells around the growing oocyte in the ovariotestis. *Limnaea stagnalis, L. peregra (Gastropoda)*
b. Cytochemistry of oogenesis. *Limnaea stagnalis (Gastropoda)* (in collaboration with Chr. P. RAVEN)

UBISCH, L. v. Dr. jur. et phil., F.I.I.E., Prof. (Emer.), Prof. (Hon.) Hamburg — PARADIS, Norway

a. Entwicklung und Metamorphose des Pluteus. *Genocidaris maculata, Spaerechinus granularis (Echinoidea)*
b. Skelettentwicklung. *Arbacia lixula (Echinoidea)*
c. Reziproke Bastardplutei. *Genocidaris maculata, Paracentrotus lividus* resp. *Psammechinus microtuberculatus (Echinoidea)*
d. Merogone. *(Genocidaris* ♀ *) Paracentrotus* ♂ resp. *Psammechinus* ♂ und vice versa *(Echinoidea)*

UHLIN, G. Fil.mag. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

a. The mechanism of agglutination of spermatozoa. *(Mammalia)* (in collaboration with P. E. LINDAHL, E. NORDLING, R. L. BRATTSAND, N.-O. BODIN and L. O. THUNQVIST)

ULRICH, H. Dr.phil., Prof. — Zool. Inst., Eidg. Techn. Hochschule, Universitätsstr. 2, ZÜRICH, Schweiz

a. Action of X-rays on nucleus and cytoplasm of eggs, and on embryological stages. *Drosophila melanogaster (Diptera)*
b. Morphology, physiology and cytology of paedogenetic bisexual reproductive cycle. *Oligarces paradoxus, Miastor metralous, Mycophila* spec. *(Cecidomyidae, Diptera)*

URBANI, E. M.I.I.E., Prof. — Ist. di Zool. e Anat. Compar., Univ. di Camerino, CAMERINO, Italia
a. Biochimica dello sviluppo embrionale e della metamorfosi. *(Insecta, Amphibia)*
b. Enzimologia e biochimica delle forme aploidi, diploidi, poliploidi. *(Crustacea, Mammalia)*

URBANI (MISTRUZZI), Mrs. L. Dott. — Ist. di Zool. e Anat. Compar., Univ. di Camerino, CAMERINO, Italia

URSPRUNG, H. — Zool.-vergl. Anat. Inst., Naturw. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH 6, Schweiz
a. Determination and field organization of imaginal discs. *Drosophila melanogaster (Diptera)*

VACEK, Z. MUDr. — Embryolog. ústav lékařské fak. Univ. Karlovy, Albertov 4, PRAHA II, Czechoslovakia
a. Development of the innervation of the gonads. *Homo sapiens (Primates)*
b. Experimental analysis of the development of the autonomic nervous system. *Gallus domesticus (Aves)*

VAHS, W. Dr. Phil. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland
a. Histochemische Untersuchung der Induktionsvorgänge. *Triturus* spec. *(Urodela)*

VAINIO, E. T. M.D. — Zool. Lab., Univ. of Helsinki, P. Rautatiekatu 13, HELSINKI, Finland
a. The immunological properties of heterogenous inductors. *(Amphibia)*
b. The antigenicity of different germinal layers. *Triturus* spec. *(Urodela)*
c. Heterotransplantation of tumours.
d. The mechanism of the induction produced by heterogenous inductors. *Triturus* spec. *(Urodela)* (in collaboration with S. I. TOIVONEN and L. O. SAXÉN)

VAKAET, L. C. M.D. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium
a. Early development. *Gallus domesticus (Aves)*
b. Fetal and neonatal endocrinology. *Mus musculus*, var. albinus *(Rodentia)*

VANDEBROEK, G. Dr.Sc., M.I.I.E., Prof. — Lab. d'Embryol., Inst. de Zool., Univ. de Louvain, 71 Rue de Namur, LOUVAIN, Belgique

VANDERHAEGE (HOUGARDY), Mrs. F. Dr. en Sci. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
a. Nucleo-cytoplasmic relations in normal and tumour (Ascites) cells.

VANNINI, E. Dr., M.I.I.E., Prof. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
a. Cycle of the nucleic acids and nucleolar changes during oogenesis. *Pisces; Amphibia)*
b. Experimental analysis of the causal development of the gonads. *(Amphibia)*
c. Experimental regeneration and genesis of the germ-cells. *(Polychaeta)*

VENEZIANO, P. P. M.S. — Cresap Biol. Lab., Coll. of Liberal Arts, Northwestern Univ., EVANSTON, Ill., U.S.A.
a. An analysis of cartilage induction. *Gallus domesticus (Aves)*
b. The incidence of spina bifida following hypophysectomy. *Gallus domesticus (Aves)*

c. The effects of respiratory inhibitors on spina bifida. *Gallus domesticus (Aves)*
d. Transplantation of neural tube to different levels of the midline axis. *Gallus domesticus (Aves)*
e. The local effect of thyroxin on transplanted pancreas in vivo. *Rana sylvatica (Anura)*
f. The effect of enheptin on testis and ovary formation. *Gallus domesticus (Aves)*
g. Alpha-lipoic acid as a growth factor in embryos. *Gallus domesticus (Aves)*

VENZKE, W. G. D.V.M., M.Sc., Ph.D. — Dept. of Veter. Anat., Ohio State Univ., COLUMBUS 10, Ohio, 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)*

VERDONK, N. H. M.Sc. — Zool. Lab. der Rijks Univ., Janskerkhof 3, UTRECHT, Holland
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)* (in collaboration with Chr. P. RAVEN)

VEREJSKAJA, Miss V. N. Cand.Biol.Sci. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Influence of high temperature on developmental processes. *Bombyx mori (Lepidoptera)*
b. Analysis of sterilizing effect of sublethal high temperatures on eggs infected with Nosema bombycis. *Bombyx mori (Lepidoptera)* (in collaboration with Mrs. T. A. BEDNJAKOVA)
c. Induction of amphidiploidy in interspecific hybrids. *Bombyx mori, B. mandarina (Lepidoptera)* (in collaboration with B. L. ASTAUROV)

VERWOERD, C. D. A. — Div. of exp. Morphol., Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O, Holland
a. Effect of X-rays on the pattern of nucleic acids in the regenerate. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

VIGH, B. Dr. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, BUDAPEST IX, Hungary
a. Investigation of eye-lens regeneration. *Pleurodeles Waltlii (Urodela)*

VILLAFRANCA, G. W. de Ph.D. — Dept. of Zool., Smith Coll., NORTHAMPTON, Mass., U.S.A.

VIVIEN, J. H. Dr. ès Sci., Prof. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France
a. Morphogénèse des gonades et du tractus génital. *(Selachii; Teleostei)* (en collaboration avec J. J. THIEBOLD et Th. MOHSEN)
b. Morphogénèse et physiologie embryonnaire des glandes endocrines. (*Selachii; Teleostei; Amphibia)* (en collaboration avec Miss J. SCHOTT et Miss D. HAY)

c. Analyse du processus de régulation et de paragénèse. *(Selachii)* (en collaboration avec Miss D. HAY)
d. Morphogénèse du tractus génital et des gonades. *Emys leprosa (Chelonia), (Ophidia)* (en collaboration avec Miss Y. STEFAN)
e. Origine de la lignée germinale, morphogénèse et différenciation des gonades. *Xiphophorus Helleri, Lebistes reticulatus, Barbus* spec. *(Teleostei)* (en collaboration avec E. FOLLENIUS)

VOLPE, E. P. Ph.D. — Dept. Zool., Newcomb Coll. of Tulane Univ., NEW ORLEANS 18, Louisiana, U.S.A.
a. Embryonic temperature adaptations in various species. *Bufo americanus, B. terrestris, B. fowleri, B. woodhousei, B. valliceps (Anura)*
b. Inheritance of color patterns. *Rana pipiens (Anura)*
c. Interspecific hybridization. *Bufo terrestris, B. fowleri, B. valliceps (Anura)*
d. Descriptions of larvae. *Bufo valliceps, B. quercicus, Rana palmipes, R. capito sevosa (Anura)*

VOY, A. Dr. ès Sci. — Lab. de Zool., Fac. des Sci., POITIERS, Vienne, France

WADDINGTON, C. H. Sc.D., F.R.S., F.I.I.E., Prof. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland
a. Metabolism of radio-isotopes. *Triturus* spec. *(Urodela)* (in collaboration with J. L. SIRLIN)
b. Phenocopies. *Drosophila* spec. *(Diptera)*
c. Developmental effects of metabolic antagonists. *(Evertebrata, Vertebrata)* (in collaboration with Miss M. M. PERRY)
d. Electron microscope studies of gene action. (in collaboration with Miss M. M. PERRY)
e. Study of certain features of developing embryos using electronmicrographs. *(Diptera), (Amphibia)* (in collaboration with G. G. SELMAN and Miss M. M. PERRY)

WAELSCH, Mrs. S. GLUECKSOHN Ph.D. — Dept. of Anat., Albert Einstein Coll. of Med., Eastchester Road, NEW YORK 61, N.Y., U.S.A.
a. Developmental physiology. *Mus musculus (Rodentia)*
b. Developmental genetics. *Mus musculus (Rodentia)*

WAGNER, G. Ph.D. — Sonnenrain, Ittigen, BERN, Schweiz
a. Empfindlichkeit verschiedener Entwicklungsstadien gegen Röntgenstrahlen. *(Amphibia)*

WAIDYASEKARA, L. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India
a. Cellular changes after chemical treatments. *Amoeba* spec. *(Protozoa)*
b. Nucleo-cytoplasmic relationship. *Amoeba* spec. *(Protozoa)* (in collaboration with. S. MOOKERJEE, Mrs. M. G. ALAMELU, Miss D. MUKHERJI and J. DUTTA)

WALKER, B. E. B.Sc., M.Sc., Ph.D. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.
a. Development of the secondary palate. *Mus musculus (Rodentia)*
b. Embryology of cortisone induced cleft palate. *Mus musculus (Rodentia)*
c. Effects on fetal development of mechanically altering the fetal environment. *Mus musculus (Rodentia)*

d. Some histochemical observations on embryonic mesenchyme. *Mus musculus (Rodentia)*

WALLACE, H. B.A. — Dept. of Zool. and Comp. Anat., The Univ. Museum, OXFORD, England

a. A study of the nucleolus during development. *Xenopus laevis (Anura)*

WARTENBERG, H. Dr.Med. — Anat. Inst. der Univ., Universitäts-Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutschland

a. Histologische, histochemische und elektronenmikroskopische Untersuchungen am Ovarialei, vor allem Utersuchungen über die Struktur und den Chemismus der Rindenhaut und der subkortikalen Granula. *Triturus alpestris (Urodela), Xenopus* spec., *Rana temporaria, R. esculenta (Anura)*

WATANABÉ, T. Dr. — Biol. Lab., Dept. of Sci., Kônan Univ., Okamoto, KOBE, Japan

a. Thermal influence upon the development of the early embryo. *Triturus* spec., *Hynobius* spec., *Bufo* spec., *Rana* spec. *(Amphibia)*

WATERMAN, A. J. M.I.I.E. — 5 Chapin Court, Williams Coll., WILLIAMSTOWN, Mass., U.S.A.

WATTERSON, R. L. Ph.D., M.I.I.E. — Cresap Biol. Lab., Northwestern Univ., EVANSTON, Ill., U.S.A.

a. Development of the liver following its inhibition by aminoguanidine. *Gallus domesticus (Aves)*

b. Spina bifida at the lumbosacral level of hypophysectomized embryos and its effect on development of the glycogen body. *Gallus domesticus (Aves)*

c. Effects of hypophysectomy upon development of long bones, skin and feather germs, hatching muscle, endocrine activity of adrenal cortex, development and alkaline phosphatase activity of the duodenum, vascularity and alkaline phosphatase content of the glycogen body; replacement therapy. *Gallus domesticus (Aves)*

d. Effects of pituitary grafts on development of endocrine glands of host embryos. *Gallus domesticus (Aves)*

WEBER, A. F.I.I.E., Prof. (Emer.) — Lab. de Neurohistol., Inst. d'Anat., Ecole de Méd., 20 Rue Ecole de Méd., GENÈVE, Suisse

a. Développement du système nerveux.

WEBER, R. D.Phil.nat. — Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

WEBER, W. Dr.rer.nat. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL, Deutschland

a. Mitotische Aktivität und Wachstumsrhythmus der Haut. *Salamandra salamandra (Urodela)*

WEDIN, K. H. Fil.mag. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

a. Dose-response curves in the action of spermicidals. *(Mammalia)* (in collaboration with P. E. LINDAHL)

WĘGLARSKA, Miss B. B.Sc. — Zool. Dept. of the Jagiellonian Univ., St. Anne 6, KRAKOW, Poland

a. Histochemical studies on development. *Melasoma populi (Coleoptera)* (in collaboration with Cz. JURA and A. KRZYSZTOFOWICZ)

WEHRMAKER, A. Dr.rer.nat. — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland

a. Einfluss der Röntgenstrahlen auf die Entwicklung. *(Urodela)*

WEI (CHENG), Mrs. D. B.S., A.M., Ph.D. — Dept. of Anat., State Univ. of Iowa, IOWA CITY, Iowa, U.S.A.

a. Congenital malformations due to maternal vitamin E deficiency. *Mus norvegicus albinus (Rodentia)*
   1. Gross observations on developing abnormal embryos.
   2. Effect of progesterone and estrone.
   3. Effect of gamma-tocopherol supplementation.

WEISS, P. A. Ph.D., M.D.(hon.c.), F.I.I.E., Prof. — Dept. of developm. Biol., Rockefeller Inst. for Med. Res., 66th St. and York Ave., NEW YORK 21, N.Y., U.S.A.

WEISZ, P. B. B.S., Ph.D. — Arnold Biol. Lab., Brown Univ., PROVIDENCE 12, R.I., U.S.A.

a. Study of morphogenesis. *Stentor* spec., *Blepharisma* spec. *(Ciliata)*
b. Study of cell division. *Stentor* spec. *(Ciliata)*, *Rana pipiens (Anura)*, *Mus norvegicus albinus (Rodentia)*

WELANDER, A. D. B.S., M.S., Ph.D. — Fisheries Center, Univ. of Washington, SEATTLE 5, Wash., U.S.A.

a. Effects of graded sublethal to lethal doses of X-rays on several different stages of the embryo. *Oncorhynchus kisutch (Teleostei)*

WELCH, R. M. Ph.D. — Dept. of Zool., Univ. of Texas, AUSTIN 12, Texas, U.S.A.

a. DNA/protein ratios in 1(2) gl, wild-type larvae, and experimentally altered larvae. Feulgen cytophotometry and interferometry. *Drosophila melanogaster (Diptera)*
b. Investigation of 1(2) gl as possible metabolic mutant, employing synthetic medium. *Drosophila melanogaster (Diptera)*

WELLS, L. J. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS 14, Minn., U.S.A.

a. Diabetes and pregnancy. *Rattus* spec. *(Rodentia)* *(Rodentia)*
b. Permeability of the placenta to injected radioactive insulin. *Rattus* spec.

WENGER, B. S. B.S., M.S., Ph.D. — Dept. of Anat., Med. School, Univ. of Kansas, LAWRENCE, Kansas, U.S.A.

a. Experimental and microchemical analysis of the developing nervous system and its relationship to peripheral structures. *Gallus domesticus (Aves)*
b. Microchemical study of glycogen in normal and aneurogenic limb muscle of the developing animal. *Gallus domesticus (Aves)*
c. Histochemical and microchemical study of lipids in the nervous system of the developing animal. *Gallus domesticus (Aves)*
d. Cytochemical and microchemical study of the developing nervous system and its relationship to developing behaviour patterns. Acid and alkaline phosphatase in isolated areas of brain and spinal cord. *Ambystoma maculatum (Urodela)* (in collaboration with P. G. ROOFE and Mrs. E. L. WENGER)

WENGER, Mrs. E. L. B.A., M.A., Ph.D. — Dept. of Anat., Med. School, Univ. of Kansas, LAWRENCE, Kansas, U.S.A.

a. Cytochemical and microchemical study of the developing nervous system and its relationship to developing behaviour patterns. Acid and alkaline phosphatase in isolated areas of brain and spinal cord. *Ambystoma maculatum (Urodela)* (in collaboration with B. S. WENGER and P. G. ROOFE)

b. Histochemical study of the developing nervous system and its relationship to developing behaviour patterns. DNA, RNA, acid and alkaline phosphatase. *Ambystoma maculatum (Urodela)* (in collaboration with P. G. ROOFE)

WENIGER, J. P. Lic. ès Sci. — Lab. de Zool. et d'Embryol. expér., Inst. de Zool. et de Biol. génér., 12 Rue de l'Université, STRASBOURG, France

a. Associations d'organes embryonnaires de même espèce et d'espèce différentes en culture in vitro; gonades, intestin. *(Aves; Mammalia)*

WESSELLS, N. K. B.S. — Dept. of Zool., Gibbs Research Labs., Yale Univ., NEW HAVEN, Conn., U.S.A.

a. Study of the differentiation of embryonic leg epidermis, both in situ and in vitro in a protein-free chemically defined medium. *Gallus* spec. *(Aves)*

WESTON, J. A. B.A. — Dept. of Zool., Gibbs Research Labs., Yale Univ., NEW HAVEN, Conn., U.S.A.

a. Studies of the origin and migration of specific cell types in morphogenesis using tritiated-thymidine labeled cells. *Gallus domesticus (Aves)*

WESTON, J. C. A.B., M.S., Ph.D. — Dept. of Anat., Ohio State Univ., COLUMBUS 11, Ohio, U.S.A.

WHITELEY, A. H. Dr., M.I.I.E., Prof. — Dept. of Zool., Univ. of Washington, SEATTLE 5, Wash., U.S.A.

WHITING, H. P. M.A., Ph.D. — Dept. of Zool., The University, BRISTOL 8, England

a. Development of the nervous system and behaviour pattern. *Scylliorhinus canicula, Petromyzon fluviatilis, Salmo* spp. *(Pisces)* (in collaboration with J. E. HARRIS)

WHITTAKER, J. R. B.A. — Dept. of Zool., Josiah Willard Gibbs Research Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.

a. Interference studies with acetylcholinesterase inhibitors and other drugs in early neural development and in cell determination. *Gallus domesticus (Aves)*

b. The developmental physiology of pteridine eye pigment formation. Factors related to pteridine dehydrogenase activity. *Drosophila melanogaster (Diptera)*

WIERTZ (HOESSELS), Mrs. E. L. M. J. Ph.D. — Veter. Anat. and Embryol. Inst., Bekkerstr. 141, UTRECHT, Holland

a. Photographical series of normal development. *Gallus domesticus (Aves)*

b. Photographical series of organ development. Domestic animals *(Mammalia)*

c. Histochemical determinations in embryos. Domestic animals *(Mammalia)*

WIGGLESWORTH, V. B. Dr., F.I.I.E., Prof. — Zool. Dept., Univ. of Cambridge, Downing St., CAMBRIDGE, England

WILDE, C. E., Jr. A.B., A.M., Ph.D., M.I.I.E. — Dept. of Pathol., School of Dentistry, Univ. of Pennsylvania, 4001 Spruce St., PHILADELPHIA 4, Pa., U.S.A.

a. Organogenesis in vitro (limb bud, gills, cranial neural crest). *Ambystoma maculatum (Urodela)*

b. Cellular differentiation (pigment cell; ectomesenchyme). 1. causal biochemistry of cellular differentiation. 2. differentiation of cytoplasmic fragments. *Ambystoma maculatum (Urodela)*

c. Morphology and causal biochemistry of striated muscle differentiation. *Ambystoma maculatum (Urodela)*
d. Continuous flow curtain 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. Differentiation of cytoplasmic fragments. *Ambystoma maculatum (Urodela)*
f. Cytochimeras in tissue culture from disaggregated cells of embryos of different classes. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

WILENS, Miss S. W. A.B. — Osborn Zool. Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.
a. The movements of the endoderm in early stages studied with the use of vital dyes. *(Urodela)*
b. Development of the gut and associated structures. *Ambystoma punctatum (Urodela)*

WILLIAMS, J. B.Sc., M.B., Ch.B. — Dept. of Biochemistry, Univ. of Cambridge, Tennis Court Road, CAMBRIDGE, England
a. Chemistry of yolk proteins. *Gallus* spec. *(Aves)*

WILLIAMS, R. G. A.B., M.S., M.D., Prof. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

WILLIAMS, S. C. B.S., Ph.D. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

WILLIER, B. H. B.S., Ph.D., Sc.D., F.I.I.E., Prof. — Dept. of Biol., The Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE 18, Md., U.S.A.
a. Re-examination of the interactions of cortical and chromaffin cells in the development of the adrenal gland and its secretory activity. *(Aves)*
b. Analysis of the nature of mechanisms operating in time and space in the development of rhythmic pigmentation design. *(Aves)*
c. Formulation of principles and concepts appertaining to the development of hormonal milieu as a means of dynamic integration of the growing embryo.
d. Histochemical study of the yolk sac membrane, a living transitory organ in which yolk substances are metabolized and/or transported to the growing embryo via the blood circulation. *Gallus* spec. *(Aves)*

WILSON, J. G. Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Florida, U.S.A.
a. Teratology.

WILSON, J. W. Ph.D., Prof. — Arnold Biol. Lab., Brown Univ., PROVIDENCE 12, R.I., U.S.A.
a. A study of mitotic activity and other cytological phenomena in liver regeneration. *(Vertebrata)*

WILT, F. H. A.B. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. An analysis of the mechanism of conversion of porphyropsin to rhodopsin in the retina during metamorphosis, with the use of biochemical methods. *Rana catesbiana (Anura)*
b. Cell and organ specific effects of structural analogues of pyridine nucleotide coenzymes and their precursors, tested in vitro. *Gallus gallus (Aves)*

c. The role of induced enzyme formation in development, tested by attempting to induce galactokinase in presumptive embyonic muscle, in vitro. *Gallus gallus (Aves)*

WIMSATT, W. A. A.B., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y., U.S.A.
a. Comparative placentology; histochemistry and histophysiology of placenta. *(Insectivora; Chiroptera; Ungulata; Carnivora)*

WINDLE, W. F. B.S., M.S., Ph.D., Sc.D. — Lab. of Neuroanat. Sci., NINDB, Nat. Inst. of Health, BETHESDA, Md., U.S.A.
a. Factors influencing regeneration of nerve fibers in the central nervous system of adult animals. *(Mammalia)*
b. Development of fiber tracts and nuclei in the brain. *Homo sapiens (Primates)*
c. Effects of asphyxia neonatorum on brain structure and function. *(*Various spp., especially *Primates)*

WINGSTRAND, K. G. Dr.Phil., Prof. — Inst. of Comp. Anat., Universitetsparken 3, COPENHAGEN Ø, Denmark

WINOWSKA, Mrs. J. M.Sc. — Zakład Anat. Porownawczej, Inst. Zool. Uniw., ul. Sienkiewicza 21, WROCŁAW, Poland

WITSCHI, E. Ph.D., F.I.I.E., Prof. — Dept. of Zool., State Univ. of Iowa, P.O. Box 585, IOWA CITY, Iowa, U.S.A.
a. Metabolism of normal and overripe eggs. *(Anura)*
b. Malformations and tumorigenesis. *(Vertebrata)*
c. Sex inheritance and differentiation (normal and experimental). *(Amphibia, Aves, Mammalia)*
d. Parabiosis and hormones in sex differentiation. *Triturus torosus (Urodela), Rattus* spec. *(Rodentia)*
e. Metamorphosis of the ear. *(Anura)*
f. Embryologic and endocrine studies in adreno-gonadal relationships. *(Amphibia, Aves, Mammalia)*
g. Nutritional conditions in the incubating egg. *(Aves)*
h. The mechanism of ovulation. *Xenopus* spec. *(Anura)*

WOELLWARTH, C. v. Dr.phil., M.I.I.E. — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland
a. Induktion des Nervensystems. *(Amphibia)*
b. Herkunft des Materials bei Induktionsgebilden. *(Urodela)*
c. Zusammenwirken von Induktor und reagierendem Gewebe bei der Vorderkopfinduktion. *(Urodela)*

WOERDEMAN, M. W. M.D., D.Sc., F.I.I.E., Prof. — Anat.-Embryol. Inst., Municipal Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Holland
a. Lensregeneration. *(Aves, Mammalia)*
b. Induction in tissue cultures and potencies of cells in tissue culture. *(Aves, Mammalia)*
c. Development of specific substances during induction and regeneration. *(Amphibia, Aves)*

WOLFF, Mrs. Em. Dr. ès Sci. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
— Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49 bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Recherches sur la différenciation in vitro des caractères sexuels embryonnaires (gonades, canaux de Müller etc.) et de différents organes. Besoins nutritifs des organes en culture en milieux synthétiques. *(Amniota)* (en collaboration avec Et. WOLFF)
b. Culture de cellules tumorales sur des explants d'organes in vitro: association d'organes embryonnaires et de tumeurs. (en collaboration avec Et. WOLFF)

WOLFF, Et. C. Dr. ès Sci., F.I.I.E., Prof. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France — Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), 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., *Anas* spec. *(Aves)*
c. Problèmes relatifs à la régénération. Origine des cellules de régénération et processus d'induction dans la régénération. *Polycelis nigra, Euplanaria lugubris (Turbellaria), Triturus cristatus (Urodela)*
d. Recherches sur la différenciation in vitro des caractères sexuels embryonnaires (gonades, canaux de Müller etc.) et de différents organes. Besoins nutritifs des organes en culture en milieux synthétiques. *(Amniota)* (en collaboration avec Mrs. Em. WOLFF)
e. Culture de cellules tumorales sur des explants d'organes in vitro: association d'organes embryonnaires et de tumeurs. (en collaboration) avec Mrs. Em. WOLFF)
f. Association d'organes hétérogènes en culture in vitro. Association d'organes d'espèces et de classes différentes. Potentialités et affinités des cellules de tissus homologues et différents dans les associations hétérogènes. *(Aves, Rodentia)*
g. Problèmes relatifs aux causes de l'achondroplasie. *Gallus gallus,* var. Creeper *(Aves)* (en collaboration avec Mrs. M. A. KIENY)
h. Recherches sur la différenciation et l'intersexualité in vitro des gonades embryonnaires. *(Aves)* (en collaboration avec Mrs. K. E. STENGER (HAFFEN))
i. Rôle des hormones dans la différenciation primaire du sexe. *Gallus* spec. *(Aves)* (en collaboration avec Mrs. Y. LUTZ (OSTERTAG))

WOLSKY, A. Dr.phil., Prof. — Biol. Lab., Fordham Univ., NEW YORK 58, N.Y., U.S.A.

a. The physiology of pigment-controlling, wing-, eye- and bristle number-controlling genes, including the production of phenocopies. *Drosophila melanogaster (Diptera), Mormoniella vitripennis (Hymenoptera), Tribolium castaneum (Coleoptera)*
b. Physiological differences between geographical races and their hybrids. *Drosophila melanogaster (Diptera)*
c. Regeneration and tissue homotransplantation (eye, antenna, skin). *Oncopeltus fasciatus (Hemiptera), Triturus viridescens (Urodela)*

WOOLLAM, D. H. M. M.A., M.D. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

a. Experimental teratology. *(Mammalia)*

WRBA, H. Dr.rer.nat., Dr.med. — Pathol. Inst. der Univ., Thalkirchnerstr. 36, MÜNCHEN, Deutschland
a. Stoffwechsel in vitro. *(Rodentia)*
b. Eihautbildung und Differenzierung in vitro. *(Rodentia)*
c. Heterotransplantation von Tumoren. *(Rodentia)*

WRÓBLEWSKI, R. Dr.Med. — Chair of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Regeneration of the thyroid gland. *Cavia cobaya (Rodentia)*
b. Cytological and histochemical investigations on the regenerating tail. *Xenopus laevis (Anura)*
c. Sex determination.

WURMBACH, H. Dr., Prof. — Entwicklungsgesch. Abt., Zool. Inst. der Univ. Bonn., BONN, Deutschland
a. Beeinflussung des Wachstums und der Differenzierung durch Wirkstoffe (Schilddrüsenhormon, Steroide, Thymuswirkstoffe). *Lebistes* spec., *Xenopus laevis, Bufo* spec., *Gallus spec. (Vertebrata)*
b. Formbildende Kräfte beim Wachstum (Wachstumsdynamik); formbildende Bedeutung der Gewebe. *Bufo* spec. *(Anura), (Aves)*

WYTTENBACH, C. R. A.B., M.A. — Dept. of Embryol., Carnegie Inst. of Washington, Wolfe and Madison Sts., BALTIMORE 5, Md., U.S.A.
a. Actively acquired tolerance to tissue-specific proteins. *(Mammalia)*

XAVIER MORATO, M. J. Prof. — Inst. de Histol. e Embriol., Fac. de Med., Avenida 28 de Maio, LISBOA, Portugal
(no embryological work in progress)

YAFFE, D. M.Sc. — Dept. of Exper. Biol., Weizman Inst. of Sci., REHOVOTH, Israel

YAJIMA, H. M.A. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
a. Effect of centrifugal force on the types of malformation. *Chironomus dorsalis (Diptera)*
b. Effect of oxygen tension on the types of malformation. *Chironomus dorsalis (Diptera)*

YAMADA, T. D.Sc., F.I.I.E., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan
a. Purification of the mesoderm-inducing factor of the bone-marrow, testing its effects in solution. *(Urodela, Mammalia)* (in collaboration with K. TAKATA)
b. Test of the inductive effect of solutions of RNA's prepared from various tissues on the isolated ectoderm. *(Urodela, Mammalia)* (in collaboration with S. OSAWA)

YAMAGAMI, K. — Biol. Inst., Coll. of Gener. Education, Univ. of Tokyo, 865 Komaba-cho, Meguro-ku, TOKYO, Japan
a. Apyrase activity and ATP content in developing skin. *Rattus* spec. *(Rodentia)*
b. Apyrase and succinoxidase in embryos. *(Echinoidea)*
c. Phosphorus metabolism. *(Teleostei, Echinoidea)*

YAMAMOTO, K. M.Sc., D.Sc., Prof. — Lab. of Fresh-water Fish Culture, Dept. of Biol., Fac. of Fish., Hokkaido Univ., HAKODATE, Japan
a. Histo-physiological studies of oogenesis. *(Teleostei)*

YAMAMOTO, T. D.Sc., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chigusa-Ku, NAGOYA, Japan

a. On the mechanism of fertilization and activation. *Oryzias latipes (Teleostei)*
b. Artificial induction of functional sex-reversal. *Oryzias latipes (Teleostei)*
c. Melanin formation in color phenotypes. *Oryzias latipes (Teleostei)* (in collaboration with T. HISHIDA and H. TOMITA)

YAMAMOTO, T. S. M.Sc. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
a. Cytochemical investigation on development. *(Teleostei)* (in collaboration with Y. KANOH)

YAMANA, K. M.Ag. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Two species of RNA in embryos and cancer tissues. *(Amphibia; Mammalia)*

YANAGISAWA, T. — Biol. Inst., Shizuoka Univ., Oiwa — 2, SHIZUOKA CITY, Shizuoka, Japan
a. Phosphate metabolism during embryogenesis and metamorphosis. *(Amphibia)*
b. Phosphate metabolism during embryogenesis. *(Echinodermata)*
c. Distribution of phosphagens and guanidine phosphoryl transferases in adults and gametes. *(Echinodermata)*

YANAI, T. Ph.D. — Dept. of Biol., Shimane Univ., MATSUE, Shimane-ken, Japan

YAO, T. Ph.D. — Lab. of Developm. Physiol., Inst. for Exper. Biol., Acad. Sinica, 320 Yo Yang Road, SHANGHAI, China

YNTEMA, C. L. Ph.D., F.I.I.E., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.
a. Induction and differentiation of ear ectoderm. *Ambystoma punctatum (Urodela)*
b. Regeneration of aneural limbs. *Ambystoma punctatum (Urodela)*
c. Development of the visceral skeleton. *Gallus domesticus (Aves)* (in collaboration with W. S. HAMMOND)
d. Stages in embryonic development. *Chelydra serpentina (Chelonia)*

YOSHIKURA, M. D.Sc. — Dept. of Biol., Fac. of Sci., Kumamoto Univ., KUMAMOTO-Shi, Japan
a. Comparative embryology. *(Araneae, Arachnoidea)*
b. The role of the pituitary in the differentiation of the gonad. *(Amphibia)*
c. The influence of high temperature on the differentiation of the gonads in hypophysectomized tadpoles. *Rana japonica (Anura)*

YOUNG, B. A. M.B., B.S. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E. 1, England
a. Fine structure of foetal thyroid. *Homo sapiens (Primates)*

YOUNG, W. C. Ph.D., Prof. — Dept. of Anat., Med. School, Univ. of Kansas, LAWRENCE, Kansas, U.S.A.
a. Reproduction as influenced by hypothyroidism and hyperthyroidism in both males and females. *Cavia porcellus (Rodentia)*
b. Sexual behaviour in the male. *Cavia porcellus (Rodentia)*

ZAAIJER, Miss J. J. P. Ph.D. — Lab. for Cytol. and exper. Histol., Fac. of Med., Univ. of Leyde, Rijnsburgerweg 10, Boerhaavekwartier, LEIDEN, Holland

a. Cartilage and bone formation in vitro. *Gallus gallus (Aves), Homo sapiens (Primates)*
b. Muscle fibre development. *Homo sapiens (Primates)*
c. Toe development. *Homo sapiens (Primates)*

ZAHND, J. P. Dr. en Méd., Lic. ès Sci. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
a. Développement du squelette. Facteurs influençant le développement. *Anas* spec. *(Aves)*
b. Formation de l'oeuf. *(Pisces, Reptilia)*
c. Recherches sur le déterminisme de la symétrie bilaterale. *(Pisces, Reptilia)*

ZAWISCH, Miss C. Dr., Prof. — Histol.-embryol. Inst. der Univ., Universitätsplatz 4, GRAZ, Oesterreich
(no embyological work in progress)

ZELENA, Mr. J. MUDr., Cand.Med.Sci. (= M.D.) — Inst. of Physiol., Czechoslovak Acad. of Sci., Na cvičišti 2, PRAHA 6, Czechoslovakia
a. Effect of innervation on the development of muscle end-organs. *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*
b. Development of reinnervated muscles devoid of proprioceptors after crushing the nerve in early ontogenesis. *Rattus norvegicus (Rodentia)*

ZENKER, W. Dr.med. — Anat. Inst., Währingerstr. 13, WIEN 9, Oesterreich

ZEUTHEN, E. Dr.phil., M.I.I.E. — Biol. Inst. of the Carlsberg Foundation, 16, Tagensvej, COPENHAGEN N., Denmark
a. Study with Cartesian divers of mitotic rhythm in oxygen uptake and in carbon dioxyde output during cleavage period. *(Echinoidea, Ciliata)*
b. Studies on the biochemistry and physiology of synchronized cell systems. *Tetrahymena pyriformis (Holotricha, Ciliata)* (in collaboration with K. HAMBURGER and P. PLESNER)
c. Studies on growth and division in pure cultures. *Acanthamoeba* spec. *(Amoebidae)* (in collaboration with L. RASMUSSEN)

ZIMMERMAN, A. A. M.I.I.E., Prof. — Dept. of Anat., Coll. of Med., Baylor Univ., HOUSTON, Texas, U.S.A.

ZOTIN, A. I. Cand.Biol.Sci. — Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R., Lenin Avenue 33, MOSCOW V-71, U.S.S.R.
a. Study of water metabolism in embryonic development. *Huso huso, Acipenser güldenstädti, A. stellatus (Acipenseriformes, Chondrostei), Salmo salar, Coregonus lavaretus (Clupeiformes, Teleostei)*

ZUCKERMAN, S. M.A., M.D., D.Sc., M.R.C.S., L.R.C.P., F.R.S., Prof. — Dept of Anat., The Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 1, England
(no embryological work in progress)

ZWAN, A. van der Med.cand. — Anat.-Embryol. Lab., Free Calvinistic Univ., Pr. Hendriklaan 27, AMSTERDAM Z., Holland

† ZWEIBAUM, J. Dr., Prof. — Zakład Histol. i Embriol., Ak. Med., ul. Chałubińskiego 5, WARSZAWA, Poland
(deceased)

ZWILLING, E. Ph.D., M.I.I.E. — Dept. of Biol., Brandeis Univ., WALTHAM 54, Mass. 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)*

ZWIRNER, R. Dr.Med. — Heiligenberg-Inst., (17b), HEILIGENBERG, Kreis Ueberlingen/Bodensee, Deutschland

a. Experimente zur Analyse der Herzentwicklung. *(Urodela)*

LIST OF INSTITUTES
with Composition of Scientific Staffs
(geographical order)

AFRICA

EGYPT (U.A.R.)

Alexandria, Moharram Bey, Alexandria, Fac. of Sci.,
Dept. of Zool.
* SEDRA, S. N. Asst. Prof.
* MICHAEL, M. I. Lect.

Alexandria, Alexandria Univ., Fac. of Med., Dept. of Anat.
* MINA, E. Y.

Cairo, Abassia, Ain Shams Univ., Fac. of Sci.
KAMEL, A.

MAROCCO

Rabat, Avenue Biarnay, Centre d'Etudes Sup. Sci.,
Lab. de Biol. Anim.
METTETAL, C. Dir.
LAHAYE, Mrs. J.
BONS, J.

SUDAN

Khartoum, Univ. of Khartoum, Kitchener School of Med.,
Dept. of Anat.
* BUTLER, H. Prof., Head
MAHRAN, Z. Y. Senior Lect.
KANAGASUNTHERAM, R. Senior Lect.
GIRGIS, M. Lect.

UNION OF SOUTH AFRICA

Bloemfontein, Univ. of O.F.S.,
Dept. of Zool.
DUYVENÉ DE WIT, J. J. Prof.
PLETZEN, R. van Lect.
* DREYER, Miss M. V. Asst.

Cape Town, Rondebosch, Univ. of Cape Town, Dept. of Zool.
DAY, J. H. Prof., Dir.
MILLARD, Mrs. N. A. H. Lect.
(no embryol. work in progress)

Cape Town, Seapoint, Beach Rd., Div. of Fisheries
Du PLESSIS, C. G. Dir.
† MARCHAND, J. M. Prof.
* JAGER, B. de Prof., Off.

Durban, P.O. Box Box 736, Marine Biol. Research Inst.
DAVIES, D. H. Prof., Dir.

Johannesburg, Hospital Hill, Univ. of the Witwatersrand, Med. School,
Dept. of Physiol.
GILLMAN, J. Prof.
GILBERT, Miss C.

Johannesburg, Milner Park, Univ. of the Witwatersrand, Fac. of Sci.,
Dept. of Zool.
* BALINSKY, B. I. Prof., Head
* GABIE (GUBBAY), Mrs. V. Lect.
* DAVIS, Miss R. J. Res. Asst.
Hospital Hill, Dept. of Anat.
* ANDREW, Miss A.
STEYN, W. Lect.

Mowbray, C. P., Univ. of Cape Town, Med. School, Anat. Dept.
SINGER, R.

Pretoria, Univ. of Pretoria,
Dept. of Animal Husbandry
JOUBERT, D. M.
(no embryol. work in progress)

Pretoria, Univ. of Pretoria,
Fac. of Sci., Dept. of Zool.
ELOFF, F. C. Prof., Head
MALAN, D. Sen. Lect.
BARRY, T. H. Lect.

Stellenbosch, Univ. of Stellenbosch,
Fac. of Sci., Zool. Inst.
TOIT, C. A. du Prof., joint Dir.
VILLIERS, C. G. S. de Prof., joint Dir.
MALAN, Miss M. E. Sen. Lect.
* ENGELBRECHT, D. van Z. Lect.
* KOCK, J. M. de Lect.

* Names of investigators who appear in the list of addresses with one or more subjects.

N. AMERICA

CANADA

ALBERTA (Alta.)

Edmonton, Univ. of Alberta, Med. School, Dept. of Anat.
* SHANER, R. F. Prof., Dir.

BRITISH COLUMBIA (B. C.)

Vancouver 8, Univ. of British Columbia, Dept. of Zool.
COWAN, I. McT., Prof., Head
* FORD, P. Assoc. Prof. Histol. & Embryol.
* FINNEGAN, C. V. Assoc. Prof. Histol & Embryol.

ONTARIO (Ont.)

Kingston, Queens Univ., Fac. of Med., Dept. of Histol. & Embryol.
KROPP, B. N. Prof., Dir.
London, Univ. of Western Ontario, Dept. of Zool.
* BATTLE, Miss H. I. Prof.
PURKO, J.
PROUSE, Miss M.
Toronto 5, 112 St. George St., Univ. of Toronto, Dept. of Zool.
FISHER, K. C. Prof., Chairman
* McCALLION, D. J. Prof.

QUEBEC (Que.)

Montréal, 2900 Boulevard du Mont Royal, Univ. de Montréal, Fac. de Méd., Dépt. d'Histol. et d'Embryol.
BONIN, W. Prof. titul., Dir.
FRAPPIER, J. Prof. agrégé
(no embryol. work in progress)
Montréal, McGill Univ.,
Dept. of Zool.
BERRILL, N. J. Prof.
Dept. of Anat.
* LANGMAN, J. Prof.
WALKER, B. E.
Dept. of Genetics
* FRASER, F. C.
TRASLER, D. G.

SASKATCHEWAN

Saskatoon, Univ. of Saskatchewan, Dept. of Anat.
ALTSCHUL, R. Prof., Dir.
* FEDOROFF, S. Instr.
* GROENENDIJK (HUIJBERS), Mrs. M. M. Asst. Prof.

UNITED STATES

ALABAMA (Ala.)

Birmingham 5, 620 South 20 th St., Med. Center of the Univ. of Alabama, Schools of Med. and Dent., Dept. of Anat.
FOLEY, J. O. Prof., Chairman
SENSENIG, E. C. Prof.
KLAPPER, Cl. E. Assoc. Prof.
MOFFETT, B. C., Jr. Asst. Prof.

ARIZONA

Tucson, Univ. of Arizona, Zool. Dept.
* BAGNARA, J. T. Prof.
RILEY, Miss A. S. Asst.

CALIFORNIA (Calif.)

Berkeley 4, Univ. of California, Dept. of Zool.
* EAKIN, R. M. Prof.
MAZIA, D. Prof.
* HARRIS, M. Prof.
BERG, W. E. Assoc. Prof.
Davis, Univ. of California, Dept. of Genetics
STEBBINS, G. L. Prof.
Los Angeles 24, Univ. of California, Dept. of Zool.
SCHECHTMAN, A. M. Prof.
FLICKINGER, R. A. Asst. Prof.
Dept. of Floriculture
* SACHS, R. M.
LANG, A.
BRETZ, C. F.
ROACH, J.
School of Med., Dept. of Anat.
GREULICH, R.C. Asst. Prof.
CLEMENTE, C. D. Asst. Prof.
Dept. of Pharmacol.
* BERNSTEIN, G. S.
Atomic Energy Project
SCHJEIDE, O. A.
Pacific Grove, Hopkins Marine Station
* MOORE, A. R. Prof.

Pasadena 4, California Inst. of Technol., Div. of Biol., Dept. of Embryol.
* TYLER, A. Prof., Head of Dept.
* FESSENDEN, Mrs. L. M. Research Asst.
VOGT, Miss H. Sen. Research Fellow
* BLACK, R. Research Fellow

San Luis Obispo, California State Polytechnic Coll., Biol. Sci. Dept.
* THURMOND, W.

Stanford, Stanford Univ., Dept. of Biol. Sci.
TWITTY, V. C. Prof., Dir.
GROBSTEIN, C.
School of Med., Dept. of Anat.
* GRAY, D. J. Prof.

COLORADO (Colo.)

Denver 20, 4200 East Ninth Ave., Univ. of Colorado Med. Center, Dept. of Pharmacol.
* KATSH, S.

CONNECTICUT (Conn.)

Middletown, Wesleyan Univ., Shanklin Lab. of Biol.
* CASPARI, E. W. Prof., Dir.
* GOODRICH, H. B. Prof.
* MORRILL, J. B.

New Haven 11, 333 Cedar St., Yale Univ., School of Med., Anat. Dept.
* STONE, L. S. Prof.
* CRELIN, E. S.
* COULOMBRE, A. J.
* COULOMBRE, J. L.

310 Cedar St., Pathol. Dept.
* BELOFF, Mrs. R. HIRSCH

New Haven 11, Yale Univ., Osborn Zool. Lab.
* NICHOLAS, J. S. Prof., Dir.
* HARRISON, R. G. Prof. (Emer.)
* BOELL, E. J. Prof.
* STONE, L. S. Prof.
* POULSON, D. F. Prof.
* WILENS, Miss S. W. Res. Assoc.
* RUDNICK, Miss D.
* HOOKER, D. Prof. (Emer.) Guestworker

* COUNCE, Miss S. J.

New Haven 11, Yale Univ., Josiah Willard Gibbs Research Lab., Dept. of Zool.
* TRINKAUS, J. P.
* HANSON, E. D.
HUVER, Ch. W.
* WESSELLS, N. K.
* BRICE, Miss M. C.
* WESTON, J. A.
* WHITTAKER, J. R.

Storrs, Univ. of Connecticut, Dept. of Zool.
* CLARK, H. Prof.
* HERRMANN, H. Prof.
* STANGAARD, B.
KONIGSBERG, Mrs. U. ROTHFELS
* LOVE, D. S.
* KLEIN, N. W.
* BRITT, Miss L. G.

Coll. of Agric., Storrs Agric. Exp. Stat., Dept. of Animal Genetics
* LANDAUER, W. Prof., Dir.
GOULARD, Mrs. S. Res. Asst.

DISTRICT OF COLUMBIA (D.C.)

Washington 7, Georgetown Univ., School of Med., Dept. of Anat.
* MENSCHIK, Z. Prof.

Washington 17, Trinity College
* DIMOND, Sister M. T.

Washington, The Catholic Univ. of America
* LYNN, W. G.

FLORIDA (Fla.)

Coral Gables 46, Univ. of Mikmi, Dept. of Zool.
* HEATH, H. D.

Gainesville, Univ. of Florida, Coll. of Med., Dept. of Anat.
* WILSON, J. G. Prof.
* FERM, V. H.
* BEAUDOIN, A. R.
* SMITHBERG, M.
* JOHNSON, E. M.
GENNARO, J. F., Jr.
AVIS, F. R.

Dept. of Biol.
* BROOKBANK, J. W.

GREGG, J. H.
WITT, R. M. De
* RAWLS, J. M.

Miami 36, 1800 N.W. 10 Avenue, Howard Hughes Med. Inst., Biochem. Dept.
* LI, Mrs. Yu-Ying FU Res. Asst. Prof.

Tallahassee, Florida State Univ., Oceanographic Inst.
* METZ, C. B.

GEORGIA (Ga.)

Atlanta 22, Emory Univ., Dept. of Biol.
* CLEMENT, A. C. Prof.
* HUNT, E. L. Prof.
* HUMPHRIES, A. A., Jr.
CATHER, J. N.

Dept. of Anat.
*MILLER, J. A., Jr.
*MILLER (STONE), Mrs. F.

Augusta, Med. Coll. of Georgia, Dept. of Microsc. Anat.
HEUSER, C. H. Prof.

ILLINOIS (Ill.)

Carbondale, Southern Illinois Univ., Physiol. Dept., Nucleic Acid Metabolism Labs.
* FINAMORE, F. J.

Zool. Dept.
* FOOTE, C. L. Prof.
* FOOTE, Mrs. F. M.

Champaign, Univ. of Illinois, Wright and Healey Sts., Vivarium
ROSE, S. M. Prof.

Chicago 12, 1853 W. Polk St., Univ. of Illinois, Coll. of Med., Dept. of Anat.
* REYNOLDS, S. R. M. Prof., Head
* SCHMIDT, A. J.
* LA VELLE, A.
* DE FEO, V. J.
* KRUGELIS (MacRAE), Mrs. E. J.

Chicago 26, 6525 Sheridan Rd., Loyola Univ., Dept. of Biol.
* HISAOKA, K. K.

Chicago 37, Univ. of Chicago, Physiol. Lab.
KRAHL, M. E.
(no embryol. work in progress)

Biol. Sci. Div., Dept. of Zool.
PRICE, Miss D. Assoc. Prof. (Embryol., Sex Biol.)
* OVERTON, Mrs. J. Res. Assoc.
CAVANAUGH, M. W.
* MOSCONA, A. A. Assoc. Prof.

5640 Ellis Ave., Committee on Biophysics
* GEYER (DUSZYŃSKA), Mrs. I.

5700 S. Ingleside, Whitman Lab.
* MINTZ, Miss B. Assoc. Prof.

Evanston, Northwestern Univ., Cresap Biol. Lab.
* WATTERSON, R. L.
* VENEZIANO, P. P.
* KING, R. C.

Dept. of Biol. Sci.
* RULON, G. O.

Lemont, P. O. Box. 299, Argonne National Lab.
* TAHMISIAN, T. N.
BEAMS, H. W. Prof.
BRÖNTE GATENBY, J. Prof.

Quincy, Quincy Coll., Dept. of Biol. Sci.
* HECKERMAN, R. O.

Urbana, Univ. of Illinois, Dept. of Zool.
ADAMSTONE, F. B. Prof., Head of Dept.

Dept. of Bacteriol.
SPIEGELMAN, S.

INDIANA (Ind.)

Bloomington, Indiana Univ., Dept. of Zool.
* TORREY, T. W. Prof., Chairman
* BRIGGS, R. W. Prof.
* HUMPHREY, R. R. Prof.
* CROWELL, P. S. Asst. Prof.
* KING, T. J.
* LYTLE, Ch. F.

Indianapolis 7, 1100 W. Michigan St., Indiana Univ.., School of Med., Dept. of Anat.
ANDREW, W.

Notre Dame, Univ. of Notre Dame
CHALKLEY, D. T.

ROTHBARD, M. J.
STOKELEY, P. S.
FINNEGAR, C. V.

IOWA (Ia.)

Ames, Iowa State Coll., Div. of Sci., Dept. of Zool. and Entomol.
HARRIS, H. M. Dir.
* HAMILTON, H. L. Prof.
* ROTHENBUHLER, W. C. Assoc. Prof.

Dept. of Genetics
* BRYAN, J. H. D.
* HOLLANDER, W. F.

Davenport, St. Ambrose Coll., Biol. Dept.
* LYNCH, W. Prof., Chairman

Iowa City, State Univ. of Iowa, Dept. of Zool.
* KOLLROS, J. J. Prof., Chairman
* WITSCHI, E. Prof., Dir. of Embryol. Lab.
* JOHNSON, D. C. Res. Asst. Prof.

FLICKINGER, R. A.
Dept. of Anat.
* WEI CHENG, Mrs. D.

KANSAS (Kans.)

Lawrence, Univ. of Kansas, Med. School, Dept. of Anat.
* ROOFE, P. G. Prof., Dir.
* TRACY, H. C. Prof. (Emer.)
* YOUNG, W. C. Prof.
* LATIMER, H. B. Prof. (Emer.)
* WENGER, Mrs. E. L.
* WENGER, B. S. Asst. Prof.

KENTUCKY (Ky.)

Lexington, Univ. of Kentucky, School of Med., Dept. of Anat.
* McCAFFERTY, R. E.

Louisville 2, 101 West Chestnut St., Univ. of Louisville, School of Med., Dept. of Anat.
* HALL, E. K.

LOUISIANA (La.)

Baton Rouge, Louisiana State Univ., Dept. of Zool.
* GOLDIE, M.

New Orleans 18, Tulane Univ., Newcomb Coll., Dept. of Zool.
* VOLPE, E. P.
* BRANDOM, W. F.

MAINE (Me.)

Bar Harbor, Roscoe B. Jackson Memorial Lab.
LITTLE, C. C. Dir. Emer.
GREEN, E. L. Dir.
* HUMMEL, Miss K. P. Staff Scient.
* SAWIN, P. B. Staff Scient.
* RUNNER, M. N. Staff Scient.
* DAGG, C. P. Staff Scient.
GREEN, M. C. Staff Scient.
* STEVENS, L. Staff Scient.
* GATES, A. H.

MARYLAND (Md.)

Baltimore 4, Goucher Coll., Dept. of Biol.
* MOMENT, G. B.

Baltimore 5, Wolfe and Madison Sts., Carnegie Inst. of Washington, Dept. of Embryol.
* EBERT, J. D. Prof., Dir.
* BARTELMEZ, G. W. Consultant
* BURNS, R. K., Jr. Staff Member, Prof.
* RAMSEY, Miss E. M. Pathologist, Investigator
* RAWLES, Miss M. E. Curator Embryol. Collection.

Staff members:
* BISHOP, D. W.
* BÖVING, B. G.
* DE HAAN, R. L.
* RUTH, R. F.

Fellows:
* McKENZIE, J.
* MUCHMORE, W. B.
* NARBAITZ, R.
* PAPACONSTANTINOU, J.
* VAN DOORENMAALEN, W. J.

Visiting investigator:
* SETTLE, G. W.

Junior investigators:
* BEARD, R. G.
* WILT, F. H.
* WYTTENBACH, C.

* COLEMAN, J. R.
* CORNER, G. W., Jr.
* LONG, W. N.

Baltimore 5, 709 N. Wolfe St., The Johns Hopkins Univ., School of Med., Dept. of Anat.

* RAFFERTY, K. A., Jr.

Baltimore 5, The Johns Hopkins Univ., School of Hygiene and Public Health, Dept. of Pathobiol.

* GRANT, Ph.

Baltimore 5, The Johns Hopkins Univ., Johns Hopkins Hospital, Dept. of Pathol.

CATHEY, W. J.

Woman's Clinic

GRUENWALD, P.

Baltimore 18, Charles and 34th Sts., The Johns Hopkins Univ., Fac. of Phil., Dept. of Biol.

* WILLIER, B. H. Prof. Emer.
* MARKERT, C. L. Prof.

BURNS, R. K. Hon. Prof.

EBERT, J. D. Hon. Prof.

* STEINBERG, M. S. Asst. Prof.
* LAUFER, H. Asst. Prof.

Baltimore 24, Nat. Insts. of Health Gerontol., Branch Baltimore, City Hospitals

* BODENSTEIN, D.

KONIGSBERG, I. R.

Bethesda 14, Nat. Inst. of Health, N.I.N.D.B.; Lab. Neuroanat. Sci.

* WINDLE, W. F. Chief
* GUTH, L.
* MIALE, Miss I.

MASSACHUSETTS (Mass.)

Boston 15, 195 Pilgrim Rd., New England Deaconess Hospital and Harvard Med. School, Lab. of Pathol.

* HICKS, S. P.

Boston 15, 25 Schattuck St., Harvard Univ., Med. School, Dept. of Anat.

* HILFER, S. R.

PADYKULA, Miss H. A.

Dept. of Pathol.

* HERTIG, A. T.
* ADAMS, Miss E. C.

* McKAY, D. G.
* BENIRSCHKE, K.

Dept. of Gynecol.

* ROCK, J.

Boston 15, 221 Longwood Ave., Boston Lying-in Hospital

* HERTIG, A. T.
* McKAY, D. G.

Brookline, 245 Pond Ave., Free Hospital for Women

* HERTIG, A. T.
* McKAY, D. G.
* MULLIGAN, W. J.
* ROCK, J.

Cambridge 38, Divinity Ave., Harvard Univ., Biol. Lab.

HOADLEY, L. Prof. (Embryol.)

Cambridge 39, Massachusetts Inst. of Technol., Dept. of Biol.

BELL, E., Jr.

Northampton, Smith Coll., Dept. of Zool.

* CARPENTER, Miss E. Prof., Chairman
* TE WINKEL, Miss L. E. Prof.

VILLAFRANCA, G. W. de Assoc. Prof.

Shrewsbury, 222 Maple Ave., Worcester Foundation for Exper. Biol.

PINCUS, G. Prof., Dir.

CHANG, M. C.

South Hadley, Mount Holyoke Coll., Dept. of Zool.

* STEIN, Miss K. F.
* KALTENBACH, Mrs. J. COUFFER

Waltham 54, Brandeis Univ., Dept. of Biol.

* JAFFE, L. F.
* ZWILLING, E.

MICHIGAN (Mich.)

Ann Arbor, 2500 East Med. Bldg., Univ. of Michigan, Med. School, Dept. of Anat.

PATTEN, B. M. Prof., Chairman of Dept.

BARRY, A. Assoc. Prof.

Dept. of Zool.

BROWN, D. E. S. Chairman

STOCKARD, A. H. Prof.
* KEMP, N. E. Assoc. Prof.
* NACE, G. W. Assoc. Prof.
LOEWENTHAL, L. A. Instructor
* CATHER, J. N. Instructor

Detroit 2, Wayne State Univ., Dept. of Biol.
* HEIM, W. G.

Detroit 7, Wayne State Univ., Coll. of Med., Dept. of Anat.
* O'RAHILLY, R. Prof.
* MEYER, D. B.

East Lansing, Michigan State Univ., Zool. Dept.
* SHAVER, J. R.
BARCH, Mrs. St. H. Res. Assoc.
OWENS, K. C. Res. Assoc.
SHIVERS, C. A. Res. Asst.

MINNESOTA (Minn.)

Minneapolis 14, Univ. of Minnesota, Coll. of Sci., Lit. and Arts, Dept. of Zool.
* SPRATT, N. T., Jr. Prof., Chairman
* KERR, N. Instr.
BROKAW, Ch. Asst. Prof.

School of Med., Inst. of Anat.
LAZAROW, A. Head of Dept.
BOYDEN, E. A. Prof. (Emer.)
* WELLS, L. J. Prof.
* FELTS, W. J. L. Asst. Prof.

MISSOURI (Mo.)

Columbia, Univ. of Missouri, Dept. of Zool.
ELDER, W. H. Prof., Chairman
NOVITSKI, E. Assoc. Prof.
CONAWAY, C. H.

School of Med., Dept. of Anat.
* BROWN, J. W.

St. Louis 5, Lindell and Skinker Aves, Washington Univ., Dept. of Zool.
* HAMBURGER, V. Prof., Head of Dept.
* MOOG, Miss F. Prof.
LEVI-MONTALCINI, Miss R. Prof.

Med. School, Dept. of Anat.
COHEN, A. I.
CHIQUOINE, A. D.

St. Louis 10, Washington Univ., Med. School, Dept. of Biochemistry
CRONE, R. K.

St. Louis 16, 4545 Oleatha Ave., Medical Research, Merck Sharp and Dohme Research Labs., Div. of Merck and Co. Inc.
REBERT, R. R.

MONTANA

Bozeman, Montana State Coll., Dept. of Zool. and Entomol.
HARVEY, E. B. Asst. Prof.
(no embryol. work in progress)

NEBRASKA (Neb.)

Omaha, The Creighton Univ., School of Med., Dept. of Anat.
CLEMENTS, L. P. Prof. of Histol.
GUGGENHEIM, P.

Dept. of Biol.
* SCHLESINGER, A. B. Assoc. Prof., Chairman

Omaha 5, Univ. of Nebraska, Coll. of Med., Dept. of Anat.
LATTA, J. S.
HOLYOKE, E. A.
FITCH, K. L.

NEW HAMPSHIRE (N.H.)

Hanover, Dartmouth Coll., Dept. of Zool.
* SPIEGEL, M.

NEW JERSEY (N.J.)

Newark 4, 1 Lincoln Ave., Rutgers Univ., Coll. of Pharmacy
* FROST, D. Asst. Prof. Biol. Sci.

New Brunswick, Rutgers Univ.
LEATHEM, J. H.

Princeton, Box 704, Princeton Univ., Dept. of Biol.
* BUTLER, E. G. Prof.
* FANKHAUSER, G. Prof.
* BONNER, J. T. Assoc. Prof.
* HARVEY, Mrs. E. BROWNE Indep. Invest.
* ALLEN, R. D.
* STINSON, B. D.

* JACOBS, W. P.
MORROW, Miss I. B.
Res. Aide

NEW YORK (N.Y.)

Brooklyn 3, 450 Clarckson Ave., State Univ. of New York, Coll. of Med., Dept. of Anat.
TALBERT, G. B.

Brooklyn 10, Bedford Ave. and Ave. H, Brooklyn Coll., Dept. of Biol.
* CHENEY, R. H. Prof.
* MARTIN, Miss B. A. Instr.

Buffalo 3, 666 Elm St., Roswell Park Memorial Inst.
BRUNST, V. V.

Buffalo 14, Univ. of Buffalo, Dept. of Biol.
* SWARTZ, G. E.
CELESTINO, V. S.
RAMM, G. M.

School of Med., Dept. of Anat.
* JONES, O. P. Prof., Head

Chronic Disease Research Inst.
* JAFFEE, O. C.

Cold Spring Harbor, Long Island Biol. Lab.
* CHOVNICK, A.

Flushing 67, Long Island, Queens Coll., Dept. of Biol.
* COLWIN, A. L. Prof.
* COLWIN, Mrs. L. HUNTER
Prof.

Ithaca, Cornell Univ., Dept. of Zool.
* ADELMANN, H. B. Prof.
* SINGER, M. Prof.
* GILBERT, P. W. Prof.
* WIMSATT, W. A. Prof.

Lab. of exper. Embryol.
ROMANOFF, A. L. Prof.

New York 3, Washington Square, New York Univ., Washington Square Coll., Biol. Dept.
* MARSLAND, D. A.
DALTON, H. C.
GROSS, P. R.

New York 16, 550 First Ave., New York Univ., Bellevue Med. Center
* ROCKSTEIN, M. Assoc. Prof. of Physiol.

New York 21, 66th St. and York Ave., Rockefeller Inst. for Med. Res.
MIRSKY, A. Dir.
* NIU, M. C.
* CORNER, G. W.
WHITAKER, D.

Dept. of developm. Biol.
WEISS, P. A. Prof., Head of Dept.
TAYLOR, A. C.
KAVANAU, J. L. Asst.

New York 27, Broadway and 116th St., Columbia Univ., Dept. of Zool.
* MOORE, J. A. Prof.
* BARTH, L. G. Prof.
* BARTH, Mrs. L. JAEGER
Res. Assoc.
* MOORE, Mrs. B. CLARK
Res. Assoc.
* BENNETT, D. Res. Assoc.

New York 32, Columbia Univ., Coll. of Phys. & Surgeons, Dept. of Radiol., Radiol. Res. Lab.
FAILLA, G. Prof., Chairman
* RUGH, R. Assoc. Prof.

Dept. of Anat.
COPENHAVER, W. M. Prof.
SHEN, S. C.

Francis Delafield Hosp., Dept. of Biochem.
* LIEDKE, Mrs. K. BEYER

New York 58, Fordham Univ., Biol. Lab.
* WOLSKY, A.
* LUDWIG, D.

New York 61, Eastchester Road, Albert Einstein Coll. of Med., Dept. of Anat.
* WAELSCH,
Mrs. S. GLUECKSOHN
* MALAMED, S.
SMITH, L. J.
DEAKIN, Miss P.
CUMMINGS, D.

Dept. of Pathol.
ROSENBAUM, R. M.

Poughkeepsie, Vassar Coll., Dept. of Zool.
* PATERSON, Miss M. C.

Rochester 20, Univ. of Rochester, Coll. of Arts & Sci., Dept. of Biol.

* HOLTFRETER, J. K. F. Prof.
Rochester 20, P.O. Box 287, Station 3, Univ. of Rochester, School of Med. and Dentistry, Dept. of Pharmacol.
BERG, G. G.
Schenectady 8, Union Coll., Dept. of Biol.
CLARK, L. B.
* RAPPAPORT, R., Jr.
Springville, Roswell Park Memorial Inst., Biol. Station
* CAIRNS, J. M.
Syracuse 10, State Univ. of New York, Med. Coll., Dept. of Anat.
* ARMSTRONG, P. B. Prof., Chairman
* YNTEMA, C. L. Prof.
* SPOFFORD, W. R. Assoc. Prof.
* HAMMOND, W. S. Assoc. Prof.
Syracuse 10, Syracuse Univ., Dept. of Zool.
EVANS, H. J.
Tuckahoe 7, Westchester County, The Wellcome Research Labs., Section of Biol.
* BIEBER, S.
Utica, Utica Coll. of Syracuse Univ.
* MANNER, H. W.

NORTH CAROLINA (N.C.)

Beaufort, Duke University, Marine Lab.
COSTLOW, L. D.
Camp Lejeune, U.S. Naval Hospital
CROWDER, R. E.
Chapel Hill, Univ. of N. Carolina, Dept. of Zool.
* COSTELLO, D. P. Kenan Prof.
LEHMAN, H. E. Assoc. Prof.
* HENLEY, Miss C. Res. Assoc. School of Med., Dept. of Anat.
* DOSSEL, W. E.
FOWLER, I.
Durham, Duke Univ., Dept. of Zool.
WILBUR, K. M. Prof., Chairman
HARGITT, G. T. Prof. (Emer.)
† PEARSE, A. S. Prof. (Emer.)
* BOOKHOUT, C. G. Prof.
* HORN, E. C. Assoc. Prof.
* GREGG, J. R. Assoc. Prof.
Raleigh, 353 Gardner Hall, North Carolina State Coll., Genetics Dept.
* GROSCH, D. S.

NORTH DAKOTA (N. Dakota)

Grand Forks, Univ. of N. Dakota, School of Med., Dept. of Anat.
SNOOK, T.

OHIO

Cincinnati 19, Eden Ave., Univ. of Cincinnati, Coll. of Med., Dept. of Anat.
CRAFTS, R. C. Chairman
BINHAMMER, R. T.
HOAR, R. M.
(no embryol. work in progress)
Columbus 10, Ohio State Univ., Dept. of Anat.
KNOUFF, R. A. Chairman
WESTON, J. C.
Dept. of Physiol.
KISSEN, A. T.
Dept. of Veterinary Anat.
* VENZKE, W. G.
DIESEM, Ch.
GROSSMAN, J.
* ANDRES, M. Y.
PAPP, E.
Gambier, Kenyon Coll.
* THORNTON, C. S.
Oxford, Miami Univ., Dept. of Zool.
* HARRISON, J. R.

OKLAHOMA (Okla.)

Oklahoma City, 801 N.E., 13th. St., Univ. of Oklahoma, School of Med., Dept. of Anat.
LACHMAN, E. Chairman
RICHTER, K. M. Assoc. Prof.
Norman, Univ. of Oklahoma, Dept. of Zool.
* GOFF, R. A. Assoc. Prof.

OREGON (Ore.)

Corvalis, Oregon State Coll., School of Sci., Dept. of Anat. and Embryol.
HILLEMANN, H. H.
BIRGE, W. J.

Portland 2, Reed Coll., Biol. Dept.
* RUBEN, L. N.

PENNSYLVANIA (Pa.)

Bryn Mawr, Bryn Mawr Coll., Dept. of Biol.
GARDINER, Miss M. Dir.
* OPPENHEIMER, Miss J. M. Prof.

Carlisle, Dickinson Coll., Biol. Dept.
* OGREN, R. E.

Haverford, Haverford Coll., Dept. of Biol.
LOEWY, A. G. Chairman
FINGER, I. Asst. Prof.
* GREEN, Mrs. E. UFFORD Res. Assoc.

Philadelphia 4, Univ. of Pennsylvania,
School of Med., Dept. of Anat.
FLEXNER, L. B. Prof., Chairman
CLARK, E. R. Prof. (Emer.)
WILLIAMS, R. G. Prof.
* HOGUE, Miss M. J. Assoc. Prof. (Emer.)
PIATT, J. Assoc. Prof.
LIU, C. N. Asst. Prof.
WILLIAMS, S. C. Assoc. Prof.
HOLTZER, H. Assoc.
School of Dentistry, Dept. of Pathol.
* WILDE, Ch. E., Jr.
Dept. of Zool.
HEILBRUNN, L. V. Prof., Dir.
FLICKINGER, R. A. Prof.
NELSEN, O. E. Prof.
PARMENTER, C. L. Prof.

Philadelphia 4, 36th St. at Spruce, Wistar Inst.
* BILLINGHAM, R. E.

Philadelphia 11, Fox Chase, 7701 Burholm Ave., Lankenau Hosp. Res. Inst. and Inst. for Cancer Res., Dept. of Embryol.
TALBOT, T. Dir. of Inst.
* KING, T. J. Head Dept. Embryol.
* SUBTELNY, S. Res. Assoc.

Pittsburgh 13, Univ. of Pittsburgh, School of Med., Dept. of Anat.
LANSING, A. I. Chairman

* DONALDSON, J. C. Prof. Emer.
* HUMPHREY, Miss T. Prof.
* GRABOWSKI, C. T. Asst. Prof.

University Park, Pennsylvania State Univ., Dept. of Zool. and Entomol.
* RUTSCHKY, C. W.

RHODE ISLAND (R.I.)

Kingston, Univ. of Rhode Island, Dept. of Zool.
HARTUNG, E. W. Prof., Head of Dept.

Providence 12, Brown Univ., Arnold Biol. Lab.
* WILSON, J. W. Prof., Head of Dept.
* CHASE, H. B. Prof.
* EDDS, M. V., Jr.
* WEISZ, P. B. Prof.
* GOSS, R. J. Asst. Prof.

SOUTH CAROLINA (S.C.)

Columbia, Univ. of South Carolina, Dept. of Biol.
LOVELACE, Miss L. R.

TENNESSEE (Tenn.)

Knoxville 16, Univ. of Tennessee, Dept. of Zool. and Entomol.
* FRASER, R. C.

Memphis 3, Univ. of Tennessee, Fac. of Biol. Sci., Med. Units Div., Dept. of Anat.
* ALDEN, R. H. Chief of Div.
* ROBERTSON, G. G. Prof.
* FITZGERALD, L. R. Assoc. Prof.
* COHN, S. A. Assoc. Prof.
* CORLISS, C. E. Asst. Prof.
* BUCHANAN, G. D. Instr.

Memphis 12, Southwestern at Memphis, Biol. Dept.
* AMY, R. L.

Oak Ridge, P.O. Box Y, Oak Ridge National Lab., Biol. Div.
* BORSTEL, R. C. von
* POPP, R. A.
Mammalian Genet. and Developm. Section
RUSSELL, W. L. Head
* RUSSELL, Mrs. L. BRAUCH
KENNEDY, Miss S. Asst.

TEXAS (Tex.)

Austin 12, Univ. of Texas, Dept. of Zool.
* JACOBSON, A.
* WELCH, R. M.
RESCH, Miss K. Res. Asst.

Galveston, Univ. of Texas, Med. Branch, Dept. of Anat.
DUNCAN, D. Dir.
* SINCLAIR, J. G. Prof.
BLOUNT, R. F. Prof.
* McNUTT, C. W. Prof.
* WALKER, B. E.
* O'STEEN, W. K.

Houston 25, P.O. Box 20068, Univ. of Texas Dental Branch, Dept. of Anat.
KIRSCHBAUM, A. Prof., Head of Dept.
BROWNING, H. C. Assoc. Prof.
GONZALEZ, F. Asst. Prof.
WRAGG, L. E. Instr.
WISWELL, O. B. Asst. Prof.
YOLLICK, B. L. Asst. Prof.
HIGGINS, G. M. Visiting Prof.

San Antonio 7, Rob 't B. Green Hospital
MANHOFF, L., Jr.

VERMONT (Vt.)

Burlington, Univ. of Vermont, Coll. of Med., Dept. of Anat.
* STULTZ, W. A.

VIRGINIA (Va.)

Charlottesville, Univ. of Virginia, Dept. of Biol.
* DENT, J. N. Prof.
* FRYE, B. E.

School of Med., Dept. of Anat.
* McKEEHAN, M. S.
* DECK, J. D.

Richmond 19, Med. Coll. of Virginia, Dept. of Anat.
* REAMS, W. M., Jr.

WASHINGTON (Wash.)

Seattle 5, Univ. of Washington, Dept. of Zool.
* TARTAR, V.
WHITELEY, A. H. Prof.

School of Med., Dept. of Anat.
ROOSEN-RUNGE, E. C.
BOYDEN, E. A. Research Prof. of Anat.
BLANDAU, R. J.
BODEMER, C. W.

Fisheries Center
* WELANDER, A. D.

WEST VIRGINIA (W. Va.)

Morgantown, Univ. of West Virginia,
Dept. of Biol.
* NORMAN, C.

Med. Center, School of Med., Dept. of Anat.
* REYER, R. W.
* BOYER, C. C.

WISCONSIN (Wis.)

Madison 6, Univ. of Wisconsin, Dept. of Zool.
* AUERBACH, R.

Bardeen Med. Labs., Dept. of Anat.
MORTENSEN, O. A. Prof., Chairman
† BAST, T. H. Prof.
* MOSSMAN, H. W. Prof.
* ORSINI, Mrs. M. WARD
* ANDERSON, J. W.

Milwaukee 3, Marquette Univ., Dept. of Biol.
* REIS, R. H. Assoc. Prof., Head of Dept.
STEIL, W. N. Prof.
* O'BRIEN, J. P. Assoc. Prof.
* SAUNDERS, J. W. Assoc. Prof.

Dept. of Physiol.
* RIECK, A. F.

CENTR. AMERICA

JAMAICA

Kingston 7, Univ. Coll. of the West Indies, Dept. of Zool.
* NEW, D. A. T.

MEXICO

México D. F., Ciudad Universitaria, Instituto de Biología
LLAMAS, R. Dir.

SÁMANO BISHOP, Miss A.
México D. F., Apartado Postal 25228, Univ. Nac. Auton., Inst. de Estudios Med. y Biol.
GONZÁLEZ GUZMÁN, I. Dir.
GONZÁLEZ-RAMIREZ, J.
(no embryol. work in progress)

PUERTO RICO (P.R.)

San Juan, N.I.N.D.B., School of Med., Lab. of Perinatal Physiol.
BAILEY, C. J. Proj. Leader
RAMIREZ DE ARELLANO, Miss M. I. R.
RANCK, J.

S. AMERICA

ARGENTINA

Tucumán, Casilla de Correos 193, Inst. de Biol. Gener. y Embriol. Exper.
* BARBIERI, F. D.
* BRAUCKMAN, Miss E. S.
LEGNAME, A. H.

BRAZIL

Belo Horizonte M. G., Caixa Postal 253, Univ. de Minas Gerais, Fac. Filos., Inst. de Biol.
* SCHREIBER, G. Prof. Zool.

Recife, Caixa Postal N. 616, Univ. do Recife, Faculdade de Medicina, Cadeira de Histol. e Embriol.
MENDONÇA, H. Prof., Head
AZOUBEL, R.

São Paulo, Univ. de São Paulo, Faculdade de Medicina de Ribeirão Preto
LISON, L.

São Paulo, Univ. de São Paulo, Faculdade de Medicina, Dept. Histol. y Embriol.
JUNQUEIRA, L. C. Prof.
(no embryol. work in progress)
Dept. of Anat., Section of Neuroanat.
* ERHART, E. A.

CHILE

Santiago, Av. Irarrázaval 849, Dept. de Med. Exper. del Servicio Nacional de Salubridad
LIPSCHUTZ, A. Prof., Dir.

Santiago, Casilla 2988, Univ. de Chile, Fac. de Med., Inst. de Biol. „Juán Noé"
NEGHME, A. Prof., Dir.

URUGUAY

Montevideo, Fac. de Med., Dept. de Histol. y Embriol.
BUÑO, W. Prof., Dir.

VENEZUELA

Merida, Univ. de Los Andes, Fac. de Ci. Med., Dept. of Anat.
* RENGEL, S., L. Prof., Head of Dept.

Dept. of Embryol.
* KLEISS, E. Prof., Head

ASIA

CEYLON

Colombo 8, Kynsey Rd., Univ. of Ceylon, Fac. of Med., Dept. of Anat.
CHANMUGAM, P. K. Prof., Dir.
KANAGASUNTHERAM, R.
(no embryol. work in progress)

CHINA

Shanghai, 320 Yo Yang Road, Acad. Sinica, Inst. of Exper. Biol., Lab. of Developm. Physiol.
PAI, S. Dir. of Inst.
TUNG, T. C. Vice Dir.
CHUANG HSIAO HUI Res. Fellow
YAO, T. Res. Fellow

HONG KONG

Hong Kong, Univ. of Hong Kong, Dept. of Zool.
* STRAHAN, R.

INDIA

Allahabad, U. P., Allahabad Univ., Zool. Dept.

SRIVASTAVA, M. D. L.
DUTTA, S. K.

Amritsar, Punjab, Med. Coll., Dept. of Anat.
* JIT, I.
SINGH, I. B. Asst. Prof.
SINGH, S. Dem.
MUCKERJEE, R. N. Dem.
NAR, R. D. Dem.
JINDAL, B. L. Dem.
GUPTA, S. K. Dem.

Bangalore 1, Univ. of Myosore, Central Coll., Dept. of Zool.
* SRINIVASACHAR, H. R.

Baroda 2, Univ. of Baroda, Dept. of Zool.
* GEORGE, J. C. Prof., Head of Dept.
* SHAH, R. V.

Calcutta 6, 4 Cornwallis Square, Scottish Church Coll., Dept. of Biol.
* BANERJEE, B.

Calcutta 9, 19 Scott Lane, Bangabasi Coll., Dept. of Zool.
* BRAHMA, S. K.

Calcutta 12, College Street, Presidency Coll., Dept. of Zool.
* MOOKERJEE, S. Prof., Head of Dept.
* BOSE, A. Guest Worker
* GANGULY, B. Hon. Res. Fellow
* SANYAL, S. Res. Fellow
* NAGARAJAN, S. N. Res. Fellow
* ADHIKARI, S. Res. Fellow
* SINHA, A. K. Res. Fellow
* MUKHERJI, Miss D. Res. Fellow
* NURJEHAN, Miss B. Res. Fellow
* WAIDYASEKARA, L. Res. Fellow
* CHOWDHURY, Miss M. Stud.
* ALAMELU, Mrs. M. G. Stud.
* DUTTA, J. Stud.
* GHOSAL, S. Stud.
* RAY, A. Stud.
* BANERJEE, S. Stud.

Calcutta 19, 35 Ballygunje Circular Road, Calcutta Univ., Dept. of Zool., Cell-Research Unit
* GANGULY, D. N.
* SARKAR, D. N.
* BANARJEE, P.
* DEV, D.
* BANARJEE, M.
* BOSE, B.
SARKAR, A. Part-time
DATTA, A. Part-time

Darjeeling, Darjeeling Government Coll., Biol. Lab.
* DASGUPTA, B.

Delhi 8, Univ. of Delhi, Dept. of Zool.
* PRASAD, M. R. N.

Hyderabad, Osmania Univ., Med. Coll., Dept. of Anat.
JAYA, Miss Y.

Madurai, Madurai Med. Coll., Dept. of Anat.
* KATHIRESAN, S.

Poona, Univ. of Poona, Zool. Dept.
MULHERKAR, Miss L. Head of Dept.

INDONESIA

Bandung, Djl. Ganeça 10, Inst. of Technol., Dept. of Chemistry and Biol.
* TISNA-AMIDJAJA, D. A.

Djakarta, Salemba No. 6, Univ. Indonesia, Fakultas Kedokteran, Bag. Ilmu Djaringan Tubuh
* SUKIRNA, M. Prof.

ISRAEL

Jerusalem, The Hebrew Univ., Dept. of Zool.
HAAS, G. Prof., Head
* STEINITZ, H.
* EYAL (GILADI), Mrs. H.
* SHULOV, A.
* BOSCHWITZ, Miss B. D.
REICH, K.
SOBEL, Mrs. H.
GOLDSCHMIDT, Mrs. E.
WAHRMAN, J.
PENER, M. P.
MEDINA, I.

Hadassah Med. School,
Dept. of Anat.
* GITLIN, G.
Petah-Tikva, Beilinson Hosp.
* BER, A. Prof. Endocrinol.
SINGER, R.
Rehovoth, Weizman Inst. of Sci.,
Dept. of Exp. Biol.
FELDMAN, M.
YAFFE, D.

JAPAN

Aikawa, Sado Island, Sado
Marine Biol. Station
* IWASAWA, H.
Anjo-City, Nagoya University,
Fac. of Agriculture, Dept. of Animal
Husbandry, Embryol. Div.
* HASEGAWA, M. Lect.
Chiba, Kurosuna-cho, Nat. Inst. of
Radiol. Sci., Div. of Genetics
* SHIOMI, T.
* KATO, K.
Fukuoka, Kyūshū Univ.,
Fac. of Sci., Dept. of Biol.
* KAWAKAMI, I. Prof.
* KAWAKAMI, Mrs. K. I.
* MIFUNE, S.
* YAMANA, K.
* MATSUMOTO, A.
* IJEIRI, Miss S.
Fac. of Med., Dept. of Anat.
MORI, M. Prof.
SEO, Sh.
Fac. of Agric., Zool. Lab.
HIRAIWA, Y. K. Prof. of Zool.
Gifu, Nagara, Gifu Univ.,
Dept. of Liberal Arts and Education,
Lab. for Biol.
* CHISHIMA, K. Prof. of Biol.
Hakodate, Hokkaido Univ., Fac. of
Fisheries, Dept. of Biol.,
Lab. of Fresh-water Fish Culture
* YAMAMOTO, K. Prof.
KUBO, T. Asst. Prof.
TAKANO, K. Asst.
Lab. of Physiol. & Ecol.
* HAMANO, S. Asst. Prof.
MOGAMI, M. Res. Asst.
Hiraka City, Osaka-Pref.,
Osaka Dental Coll.
* SHIN-IKÉ, T.

Hiroshima, Higashisenda-cho,
Hiroshima Univ., Fac. of Sci.,
Zool. Lab.
* KAWAMURA, T. Prof.
SAMBUICHI, H.
* NADAMITSU, S.
Ikeda, Osaka-Pref., Osaka Liberal
Arts Univ., Lab. of Morphol.
* NAKAMURA, O. Prof.
TAHARA, Y. Lect.
Kanazawa, Univ. of Kanazawa,
Fac. of Sci., Zool. Inst.
* KIDO, T. Asst. Prof.
Med. School, Dept. of Pathol.
ISHIKAWA, T.
INOUE, Miss K.
KURATA, Y.
Kobe, Kobe Univ., Biol. Inst.
* FUJII, S. Prof.
KAWABE, M. Asst. Prof.
KIMOTO, Y. Asst.
KANEHISA, T. Asst.
Kobe, Okamoto, Kônan Univ.,
Dept. of Lit. and Sci., Biol. Lab.
* TAKAYA, H. Prof.
* KAJI, S. Asst. Prof.
* MASUI, Y. Lect.
* WATANABÉ, T. Res. Stud.
* INOUYE, I. Res. Stud.
Kōchi, Kōchi Univ., Fac. of
Education
KOMATSU, Miss T. Prof., Dir.
* OIKAWA, Miss I. Asst. Prof.
Kôfu, Yamanashi Univ., Biol. Dept.
SIRAKAMI, K. I.
Kumamoto-shi, Kumamoto Univ.,
Fac. of Sci., Dept. of Biol.
* ITO, S.
* YOSHIKURA, M.
* SASAKI, N.
Kyoto, Sakyo-ku, Univ. of Kyoto,
Fac. of Sci.,
Dept. of Biol.
* IMAIZUMI, T.
Lab. of Embryol. and Exp. Morphol.
* ICHIKAWA, M. Prof., Dir.
* KATO, M. Asst. Prof.
* IKUSHIMA, N. Lect.
OKADA, T. S. Asst.
* NISHIITSUTSUJI (UWO),
Mrs. J. Asst.

* HARADA, M.
OKADA, Miss E.
Dept. of Anat.
* NISHIMURA, H.
Kyoto, Shimogamo, Saikyo Univ., Biol. Lab.
NAKANE, T. Asst. Prof. Zool.
(no embryol. work in progress)
Maebashi, Gunma Univ., Anat. Inst.
* TAKISAWA, A. Prof.
* SENO, T. Instr.
Inst. of Endocrinol.
* HANAOKA, K. I. Prof.
* INOUE, S. Asst. Prof.
IMAI, K. Asst.
* NONAKA, T.
Matsue, Shimane-ken, Shimane Univ., Dept. op Biol.
YANAI, T. Prof.
OUJI, M. Lect.
Matsumoto City, Katakura Sericultural Experiment Station
FUKUDA, S.
Misaki, Kanagawa-ken, Misaki Marine Biol. Station
* HIRAMOTO, Y.
* KANATANI, H.
Morioka, Iwate Univ., Fac. of Agr., Inst. of Applied Entomol.
* MIYA, K.
Nagasaki, Nagasaki Univ., Fac. of Med., Anat. Dept.
SATOH, J. Prof.
* SETOGUTI, T. Asst. Prof.
* KOONO, J. Asst.
Nagoya, Chigusa-Ku, Nagoya Univ., Fac. of Sci., Biol. Inst.
SHIMAMURA, T. Prof., Dir.
SATO, T. Prof.
* YAMAMOTO, T. Prof.
* YAMADA, T. Prof.
* HAYASHI, Y. Asst. Prof.
* KAJISHIMA, T. Lect.
* NAKANO, E. Lect.
* TAKATA, K. Asst.
* OSAWA, S. Asst.
* HISHIDA, T. Asst.
* OKAZAKI, R. Res. Assoc.
* AKETA, K. Asst.
* TOMITA, H.
* KARASAKI, S. Guest worker
* KATO, M. Asst.
TAKATA, Miss C.
* EGUCHI, G. Res. Assoc.
* OKAZAKI, Mrs. T.
* TAKEUCHI, K.
MATSUDA, Miss N.
* KURIKI, Y.
* OOTA, Y.
* HOTTA, Y.
Res. Inst. of Environmental Medicine
* MURAKAMI, U.
* KAMEYAMA, Y.
* ANDO, S.
Nishinomiya-City, Hyogo-Pref., Kwansei Gakuin Univ., Biol. Lab.
OJIMA, Y.
Osaka, Ten-noji-ku, Osaka Lib. Arts Univ., Biol. Lab.
* SUGINO, H. Prof.
Osaka, Kita-ku, Minami-Ogimati, Osaka City Univ., Coll of Sci., Dept. of Biol.
* ASAYAMA, S. Prof.
* AMANUMA, A. Lect.
* MIYAMORI (YAMAMOTO), Mrs. H. Asst.
* KOTANI, M. Asst.
* FURUSAWA, M. Asst.
Sapporo, North 8, West 5, Hokkaido Univ., Fac. of Sci., Zool. Inst.
* MAKINO, S. Prof.
* ICHIKAWA, A. Prof.
MOMMA, E. Asst. Prof.
* KANOH, Y. Asst. Prof.
* AOTO, T. Asst. Prof.
TONOMURA, A. Asst.
* YANAGISAWA, T. Asst. Prof.
YANAGIMACHI, R.
SASAKI, M.
* TAKAHASHI, H.
Sendai, Katashira-cho, Tohoku Univ., Inst. of Biol., Lab. of Embryol.
MOTOMURA, I. Prof., Dir.
Shizuoka City, Oiwa 2, Shizuoka Univ., Biol. Inst.
* YANAGISAWA, T. Asst. Prof.
Toba, Mie-ken, Sugashima-cho, Nagoya Univ., Sugashima Marine Biol. Station

* SUGIYAMA, M. Dir.
* ISHIKAWA, M. Asst.
* KOJIMA-KUNO, M. Asst.

Tokushima, Tokushima Univ., Fac. of Lib. Arts and Sci., Biol. Inst.
OKADA, K. Dir.

Tokyo, Daito-ku, Ueno-Park, Nat. Museum of Nat. Sci.
* OKADA, Y. K. Dir.

Tokyo, Itabashi-ku, no. 30 Ooyaguchi-kamimachi, Nihon Univ., Med. Fac., Anat. Inst.
* NAKAYAMA, T .
KITAGAWA, T.
SATO, Y.
TAKEUCHI, R.
TEZUKA, M.

Tokyo, Setagaya-ku, Tokyo Metropolitan Univ., Fac. of Sci., Dept. of Biol., Embryol. Section
* DAN, K. Prof., Head of Sect.
* OKAZAKI, Miss K. Res. Asst.
* SAKAI, H. Res. Asst.
* YAJIMA, H.
* TERAMURA, Miss Y.

Tokyo, Bunkyo-ku, Otsuka-Kubomachi 24, Univ. of Education, Inst. of Zool.
* OKA, H. Prof., Head
* SEKIGUCHI, K.

Tokyo, Hyakunin-cho, 400, Shinjuku, Research Inst. for Nat. Recources
* MAWATARI, Sh.

Tokyo, Suginami, Koenji, Sericultural Exp. Station, Physiol. Dept.
* TAKAMI, T.
* ITO, T.

Tokyo, Bunkyo-ku, Ochanomizu Univ., Fac. of Sci., Dept. of Biol., Embryol. Section
* DAN, Mrs. J. C.

Tokyo, Bunkyo-ku, Tokyo Univ., Fac. of Sci., Zool. Inst.
TAKEWAKI, K. Prof., Dir.
* FUJII, T. Prof.
KINOSITA, H. Prof.
* ISHIDA, J. Prof.
KOBAYASHI, H. Asst. Prof.
UTIDA, S. Asst. Prof.

Tokyo, 865 Komaba-cho, Meguro-ku, Univ. of Tokyo, Coll. of General Education, Biol. Inst.
* NUMANOI, H.
* YAMAGAMI, K.
* MOHRI, H.
NAKAZAWA, T.
MARUYAMA, K.

Tokyo, Yushima, 3, Bunkyo-ku, Tokyo Med. and Dental Univ., Dept. of Anat.
* NIIZIMA, M.
* NAKAMURA, I.
TAKAGI, A.
KASAI, T.
KITAMURA, H.

Toyama, Hasumachi 22, Toyama Univ., Fac. of Liberal Arts, Biol. Inst.
* HORI, R.

Tsu-City, Mie-Pref., Mie Prefectural Univ., Fac. of Fisheries, Zool. Inst.
* SHIINO, S. M.
OOISHI, Miss S.

Urawa, Saitama Univ., Dept. of Biol.
* ISHIHARA, K.

Yokohama, Hiyoshi, Keio Univ., Biol. Lab.
* MORI, Y. Prof., Head
* MORI, H. Prof.
* HAMA, T. Prof.
* GOTO, T. Lect.
* OBIKA, M. Asst.
* MATSUMOTO, J. Asst.
* ENDO, Y. Lect.
* KATAKURA, Y. Lect.

LEBANON

Beirut, American Univ., Dept. of Biol.
* BUTROS, J. M. Assoc. Prof.

PAKISTAN

Dacca, Dacca Univ., Dept. of Zool.
SHAFIQ, S. A.

Lahore, Government Coll., Dept. of Zool.
* ISLAM, A.
* ARSLAN, M.
* GILANI, S. H.
* QURESHI, W. H.

THAILAND

Bangkok, Univ. of Medical Sci., Fac. of Med. and Siriraj Hosp., Dept. of Anat.
SANGVICHIEN, S.

TURKEY

Ankara, Ankara Univ., Veter. Fac., Inst. of Histol. and Embryol.
ERENÇIN, Z. Prof.
HASSA, O.
(no embryol. work in progress)
Med. Fac., Inst. of Histol. and Embryol.
MUTLU, Mrs. K. Prof., Dir.
(no embryol. work in progress)
Izmir, Bornova, Ege Univ., Tıp Fak., Morfol. Enst.
BÜYÜKÖZER, Miss I.
Istanbul, Süleymaniye--Müftülük, Zool. Inst.
SEVKET GIZ, F. Prof.

AUSTRALIA

AUSTRALIA

NEW SOUTH WALES

Armidale, The New England Univ., Dept. of Zool.
* STOCK, A. Prof.
* O'FARRELL, A. F. Prof.
* MORGAN, Miss J. A. Res. Asst
* GILES, E. T.
Prospect, Great Western Highway, (P.O. Box 144, Parramatta), Div. of Anim. Health and Product., Commonwealth Sci. and Industr. Res. Org., Sheep Biol. Lab.
McDONALD, I. W. Off. in Charge
* LYNE, A. G. Sen. Res. Off.
* SCHINCKEL, P. G. Princ. Res. Off.
* SHORT, B. F. Sen. Res. Off.
* ALEXANDER, G. Sen. Res. Off.
* BRADEN, A. W. H. Sen. Res. Off.
Sydney (c/o Univ. of Sydney, Dept. of Zool.), Commonwealth Sci. and Industr. Res. Org., Animal Genet. Sect.
RENDEL, J. M. Off. in Charge
FRASER, A. S. Princ. Res. Off.
SOBEY, W. R. Sen. Res. Off.
Sydney, Univ. of Sydney, Dept. of Zool.
* MURRAY, P. D. F. Prof., Dir.
STEPHENSON, N. G.
ANDERSON, D. T.
Dept. of Histol. and Embryol.
STUMP, C. W. Dir.
CLELAND, K. W.
* O'BRIEN, B. R. A.
REID, B. L.
* SULLIVAN, G. E.
LENNEP, E. W. van

QUEENSLAND

Brisbane, Yeerongpilly, Fairfield Rd., Univ. of Queensland, School of Veter. Sci., Dept. of Veter. Anat. & Parasitol.
TUCKER, R.

SOUTH AUSTRALIA

Adelaide, Univ. of Adelaide, Dept. of Anat.
PACKER, A. D.

VICTORIA

Carlton N. 3, Univ. of Melbourne, Anat. Dept.
* LAVARACK, J. O.
* LEWIS, O. J.

NEW ZEALAND

Canterbury, Lincoln Coll., Canterbury Agric. Coll.
HART, D. S.
McLEAN, J. W. Prof.
Christchurch, Canterbury Univ., Dept. of Zool.
† PERCIVAL, E. Prof.
* STOUT, Miss V. M.
Dunedin, Univ. of Otago, Dept. of Zool.

* BREWIN, B. I.
MARPLES, B. J. Prof.
Dunedin, C. 1, Great King Street, Univ. of Otago, Med. School, Dept. of Anat.
ADAMS, W. E. Prof.
(no embryol. work in progress)

EUROPE

AUSTRIA

Graz, Universitätsplatz 4, Inst. für Histol. und Embryol.
ZAWISCH, Miss C. Prof.
(no embryol. work in progress)
Innsbruck, Tyrol, Müllerstr. 59, Histol.-Embryol. Inst. der Univ.
SAUSER, G. Prof., Vorstand
OLBRICH, E. Asst.
Wien IX, Währingerstr. 13, Anat. Inst. der Univ. Wien
HAYEK, H. Prof., Dir.
ZENKER, W.
KRAUSE, W.
PLATZER, W.
SALSER, G. M.

BELGIUM

Bruxelles, 50 Av. F. D. Roosevelt, Univ. libre de Bruxelles, Fac. des Sci., Inst. de Zool. Torley-Rousseau, Lab. de Zool.
BRIEN, P. L. Prof., Dir.
HERLANT(MEEWIS), Mrs. H. Chef de Trav.
RASMONT, R. Asst.
BOUILLON, J. Asst.
RENIERS(DECOEN), Mrs. M. Technic.
Bruxelles, 97 Rue aux Laines, Fac. de Méd. de l'Univ., Lab. d'Anat. et d'Embryol.
* DALCQ, A. M. Prof., Head of Dept.
PASTEELS, J. J. Prof.
GÉRARD, P. Prof.
* MULNARD, J. Chargé de cours
* MILAIRE, J. Aspirant du F.N.R.S.
* TONDEUR, M.
Bruxelles-Auderghem, 1850 Chaussée de Wavre, Univ. libre de Bruxelles, Lab. de Morphol. anim.
* BRACHET, J. L. A. Prof., Dir.
* FICQ, Mrs. A. A. Asst.
* BALTUS, Miss E. Asst.
* VANDERHAEGHE, Mrs. F. Asst.
* TENCER, Miss R.
* BIELIAVSKY, N. Asst.
Gent, Bylokekaai 1, Univ. of Gent, Fac. of Med., Lab. of Anat.
* FAUTREZ, J. C. Prof., Dir.
* FAUTREZ(FIRLEFYN), Mrs. N. J.
* VAKAET, J. C.
* ANTEUNIS, Miss A. H. J.
* COLLE(VAN DE VELDE), Mrs. A.
VAN DE KERCKHOVE, D.
ROELS, H.
Gent, Universiteitstr. 14, Lab. voor Zool., Afd. Morphol.
DE CONINCK, L. A. P. Prof.
HUBLÉ, J.
DENUCÉ, J. M.
Liège, Quai Ed. Van Beneden 22, Inst. Zool. Ed. van Beneden, Dépt. de Morphol. des Chordés
* DAMAS, H. F. C. Prof.
* DENIS, H. A. Asst.
Liège, 20 Rue de Pitteurs, Univ. de Liège, Fac. de Méd., Lab. d'Histol. et d'Embryol.
* CHÈVREMONT, M. Prof., Chef du Dépt.
CHÈVREMONT(COMHAIRE), Mrs. S. Chef de Travaux
FREDERIC, J. Chef de Travaux
BAECKELAND, E. Asst.
BASSLEER, R. Asst.
Louvain, 38 Rue des Récollets, Univ. de Louvain, Inst. d'Anat.
* CAMPENHOUT, E. van Prof., Dir.
* LEBLOND, C. P.
Louvain, 71 Rue de Namur, Univ. de Louvain, Inst. de Zool., Lab. d'Embryol.

VANDEBROEK, G. Prof., Dir.
SMET, W. M. A. de

BULGARIA

Sofia 13, Blwd. Lenin N. 2, Univ. of Sofia, Med. School, Inst. of Gener. Biol.
* DIMITROVA, Miss A. I. Assoc. Prof.

CZECHOSLOVAKIA

Olomouc, Fierlingerova ul., Palacký Univ., Fac. of Med., Inst. of Histol. and Embryol.
* OBRUČNÍK, M. Dir.

Plzeň, Karlovarská 48, Charles Univ., Fac. of Med., Inst. of Histol. and Embryol.
* SLABÝ, O. Prof., Dir.
* SLÍPKA, J.
* MATĚJKA, M.

Praha II, Viničná 7, Charles Univ., Zool. Inst., Dept. of Gener. and Exp. Zool.
* SLÁDEČEK, F. Dir. of Dept.
* ROMANOVSKÝ, A. Chief Asst.
* NEDVÍDEK, J. Asst.

Praha II, U nemocnice 3, Charles Univ., Dept. of Anat.
* LEMEŽ, L.
* RYCHTER, Z.
* DOSKOČIL, M. Asst.
* JELÍNEK, R. Asst.

Praha II, Albertov 4, Univ. Karlovy, Embryolog. ústav lékařské fak.
* FRANKENBERGER, Z. Prof., Dir.
* VACEK, Z. Chief Asst.
* LOJDA, Z. Asst.
KRAUS, R. Asst.
* JIRÁSEK, J. Asst.

Praha 6, Na cvičišti 2, Czechoslovak Acad. of Sci., Inst. of Biol.
* NOVÁK, V. J. A.

Dept. of Exp. Biol. and Genet.
* HAŠEK, M. Dir.
VOJTÍŠKOVA, M. Adj. Dir.
GROZDANOVIČ, J. Res.
HAŠKOVÁ, V. Res.
HORT, J. Res.
HRABA, T. Res.
CHUTNA, J. Res.
LENGEROVÁ, A. Res.
RYCHLÍKOVÁ, M. Res.
KOLDOVSKÝ, P. Asp.
SVOBODA, J. Asp.

Inst. of Physiol.
* ZELENÁ, Mrs. J.

DENMARK

Copenhagen Ø, Universitetsparken 3, Inst. for Alm. Zool.
* BRØNDSTED, H. V. Prof., Dir.
* HOLST CHRISTENSEN, P. Amanuensis
* PEDERSEN, K. J. Asst.

Inst. of Comp. Anat.
WINGSTRAND, K. G. Prof.

Copenhagen N, 16 Tagensvej, Biol. Inst. of the Carlsberg Foundation
* ZEUTHEN, E.
* PLESNER, P.
* HAMBURGER, K.
* RASMUSSEN, L.

ENGLAND
(Vid. UNITED KINGDOM)

FINLAND

Helsinki, Univ. of Helsinki, Fac. of Med., Inst. of Anat.
HJELMMAN, G. Prof., Dir.
MUSTAKALLIO, M. Prosector
* LYDECKEN, K.

Helsinki, P. Rautatiekatu 13, Univ. of Helsinki, Zool. Lab.
SUOMALAINEN, P. Prof., Dir.
* TOIVONEN, S. I. Prof.
* KUUSI, Miss T. K.
* SAXÉN, L. O.
* VAINIO, E. T.

FRANCE

Bordeaux, Univ. de Bordeaux, Fac. de Méd., Lab. d'Histol.
MAYER, G. Prof.
* STOLL, R.
MARAUD, R.

Clermont-Ferrand, 1 Av. Vercingétorix, Lab. de Zool.
* LUTZ, H. Prof.
* LUTZ(OSTERTAG), Mrs. Y. Chargée de Recherches

* GOMOT, L. Attaché de Recherches
* DUFAURE, J. P. Asst.
Gif-sur-Yvette (S. et O.), Lab. de Génét. évolutive du C.N.R.S.
* CHARNIAUX(COTTON), Mrs. H.
Marseille, Place Victor Hugo, Lab. de Zool. génér. de la Fac. des Sci. et Stat. marine d'Endoume (Marseille)
ABELOOS, M. Prof., Dir.
Nancy (Meurthe & Moselle), 31 Rue Lionnois, Fac. de Méd. de Nancy, Lab. d'Anat.
BEAU, A. A. Prof.
Lab. d'Histol.
LEGAIT, E. Prof., Dir.
* GRIGNON, G. dél. Agr.
Lab. d'Embryol.
* DOLLANDER, A. Prof., Dir.
* CURY, G. Attaché de Recherches
* BROUANT, J. F. Stud.
* GASSIOLE, Mrs. D. Stud.
Nancy (Meurthe & Moselle), 30 Rue Sainte Cathérine, Lab. de Physiol. Génér.
* GAYET, J. F. Prof.
* SCHWANDER, J.
* BONICHON, Miss A.
Nantes (L. Atl.), 16 Quai Moncousu, Fac. de Méd., Lab. d'Histol.
TUSQUES, J. M. Prof. Agrégé
Nogent sur Marne (Seine), 49bis Avenue de la Belle-Gabrielle, Collège de France, Lab. d'Embryol. et Tératol. du C.N.R.S.
(Vid. **Paris** Ve, Lab. d'Embryol. expér. du Collège de France)
Orsay (S. et O.), Centre d'Orsay, Fac. des Sci. de Paris, S.P.C.N., Lab. de Biol. Anim.
* LENDER, Th. Prof.
Paris Ve, 11 Place Marcelin Berthelot, Collège de France,
Lab. de Morphol. expér. et Endocrinol.
COURRIER, R. Prof.
Lab. d'Embryol. expér.
* WOLFF, Et. Prof., Dir.

* WOLFF, Mrs. Em. Maître de Recherches
* SENGEL, Ph. Sous-Dir. du Lab. du Coll. de France
BENOIT, J. A. A.
* BERMANN, F. Stagiaire
* CALAME, Miss S. M.
* CROISILLE, Y.
* DAMERON, Miss F.
* DIETERLEN(LIÈVRE), Mrs. F. Attachée de Rech.
* GOUBE de LA FOREST, P.
* HAMPÉ, A.
* KIENY, Mrs. M. A. Chargée de Rech.
* KIRRMANN, J.-M. Attaché de Rech.
* LAZARD(HAUBEN), Mrs. L. Stagiaire
* MARIN(LEWIN), Mrs. L. Attachée de Rech.
* REYSS-BRION(DUCREAU), Mrs. M. Attachée de Rech.
* SALZGEBER, Miss B. Chargée de Rech.
* SCHEIB(PFLEGER), Mrs. D. Chargée de Rech.
* SCHOWING, J. Stagiaire
* SENGEL, Miss C.
* SIGOT, M. Asst.
* SIGOT(LUIZARD), Mrs. M. F.
* STENGER(HAFFEN), Mrs. K. E. Chargée de Rech.
* STRUDEL, G.
Paris Ve, 1 Rue Victor Cousin, Fac. des Sci., Lab. d'Anat. et d'Histol. comp.
* DEVILLERS, Ch. Prof.
* FRANÇOIS, Y.
Paris Ve, 13 Rue Pierre Curie, Fac. de Méd., Inst. de Biol. Physicochim.
ANCEL, P. A. Prof.
* LALLIER, R. A.
Paris Ve, 12 Rue Cuvier, Univ. de Paris, Fac. des Sci.,
Lab. d'Embryol.
* GALLIEN, L. Prof., Dir.
HOUILLON, Ch. M. Conf.
SIGNORET, J. Chef de trav.

BEETSCHEN, J. Cl. Chef de trav.
COLLENOT, A. Asst.
LABROUSSE, J. Asste.
CERTAIN, Ph. Asste.
CHALUMEAU, M. Th. Stagiaire de Rech. C.N.R.S.

Lab. de Physiol. comp.

* JOST, A. D. Prof., Dir.
JACQUOT, R. Chef de trav.
PICON, L. Asst.
GELOSO, J. P. Asst.
COHEN, Miss A.
ROFFI, J.
MANIEY, J. Asst.

Pavillon Curie, Lab. de Biol. Animale

* MAY, R. M. Prof.
* THILLARD, Miss M. J. Asste.

Paris Ve, 55 Rue de Buffon, Ecole d'Anthropol. de P. Broca

MARIN, L. Ministre, Dir.

* FRIANT, Miss M. Prof.

Paris VIe, 45 Rue des Sts. Pères, Fac. de Méd. Nouvelle, Lab. d'Embryol.

* GIROUD, A. Prof., Dir.
* TUCHMANN-DUPLESSIS, H. Prof.
* MARTINET, Mrs. M.
* MERCIER(PAROT), Mrs. L.
PARRANT, M. Stomatol. des Hôpit.
* HUYGNARD, C.
* LEFEBVRES(BOISSELOT), Mrs. J.
* ROUX, C. Asst.

Lab. d'Anat. fonctionnelle

* DELMAS, A. Prof., Dir.
* AARON, Cl.
* OLIVIER, G.
* ECHEVERRIA, M.
* EYRIES, Ch.
* QUÉNU, L.
* QUEREUX, P.
* PINEAU, H.
* VAN STEENKISTE, J.

Paris VIe, 105 Boulevard Raspail, Fac. des Sci. de Paris, Lab. d'évolution des êtres organisés

GRASSÉ, P. P. Dir.
MIALHE, P. Asst.

Paris XIIIe, 111 Rue L. M. Nordmann, Univ. de Paris, Hôpital Broca, Ecola Prat. de Hautes Etudes, Lab. d'Hormonol. et Cytol. expér.

* MORICARD, R. Dir.
* GOTHIÉ, Miss M. M. C. S.
* GUILLAUD, N.
* RODRIGUEZ(GALINDO), Mrs. M.
* HINGLAIS(GUILLAUD), Mrs. N.
* CARTIER, R.

Paris XVIe, 4 Avenue Gordon Bennett, Collège de France, Lab. d'Histophysiol.

* BENOIT, J. Prof.
* LEROY, P. J. M.
* TIXIER(VIDAL), Mrs. A. Agr.
* MOSZKOWSKA, Mrs. A.
* ASSENMACHER, I. A.

Poitiers, Vienne, Fac. des Sci., Lab. de Zool. et Biol. animale

LARAMBERGUE, M. de Prof. Zool.
LEGRAND, J. J. Prof. Biol. anim.
VOY, A. Maître de Conf.
MICHON, J. Chef de trav.
ALAPHILIPPE, F. Chef de T.P.
CHAIGNEAU, J. Asst.
REGONDAUD, J. Asst.
TARDY, J. Asst.
JOHNSON, G. Cherch. C.N.R.S.

Roscoff (Finistère), Station Biol.

DEROUX, G. Chef de trav.

Sannois (S. et O.), Quartier des Vieux Moulins, Lab. de l'Inst. Pasteur

* RAYNAUD, A. Chef

Strasbourg, 12 Rue de l'Université, Univ. de Strasbourg, Fac. des Sci., Lab. de Zool. et Embryol. expér.

* VIVIEN, J. H. Prof., Dir.
SIGOT, A. Prof.
* STÉPHAN, Fr. Prof.
* HAMPÉ, A. Chargé de cours
* FOLLENIUS, E. Chef de trav.
* THIEBOLD, J. J. Chef de trav.

* MELLINGER, J. Asst.
KIRSCH, R. Asst.
* SCHOTT, Miss J. Asste.
* HAY, Miss D. Asste.
* PERRENOT, Miss M. Asste.
* STÉPHAN(DUBOIS), Mrs. Fr. Maître de rech.
* SIMON(WITTERSHEIM), Mrs. D. Attachée de rech.
RUHLAND(GAISER), Mrs. M. L. Attachée de rech.
* STÉFAN, Miss Y. Attachée de rech.
* WENIGER, J. P. Attaché de rech.
PETROVIC, A. Cherch. libre
* MOHSEN, Th.

Lab. de Biol. génér.
* BOUNOURE, L. Prof., Dir.
* AUBRY, Miss R. Stagiaire de rech.

Strasbourg, 1 Place de l'Hôpital, Fac. de Méd., Inst. d'Embryol.
* CLAVERT, J. M. J. Prof., Dir.
* ZAHND, J. P. Chef de trav.
ZAHND, Mrs. M. M. Asste.
* RUCH, J. V. Asst.

Talence (Gironde), 40 Rue Lamartine, Fac. des Sci. de l'Univ. de Bordeaux, Lab. de Zool.
AVEL, M. Prof., Dir.
* HAGET, A. Maître de Confér.
* SCHOELLER, Miss J.

Talence (Gironde), 351, Cours de la Libération, Fac. des Sci. de l'Univ. de Bordeaux, Lab de Biol. Anim.
* CAMBAR, R. Prof.
* GIPOULOUX, J. D. Asst.
* DECHAMBE, Miss C. Asst.

Ville d'Avray (S. et O.), 29 Rue Pradier
* ROSTAND, J. Prof.

GERMANY (East)

Rostock, Stalinplatz, Zool. Inst. der Univ.
* ARNDT, E. A. Oberasst.
* PENZLIN, H. Wiss. Asst.

GERMANY (West)

Bonn, Zool. Inst. der Univ., Entwicklungsgeschichtl. Abt.
* WURMBACH, H. Prof.
HAARDICK, H.
SCHNEIDER, L.
ERHARD, R. P.
CLAES, H.
BIWER, A.

Darmstadt, Zool. Inst. der Technischen Hochschule
* LUTHER, W. Prof.

Erlangen, Wasserturmstrasse 5, Physiol.-chem. Inst. der Univ.
* HORSTMANN, H. J.

Frankfurt/Main Süd, Ludwig Rehnstr. 14, Med. Fak. der Univ., Dr. Senckenbergisches Anat. Inst.
STARCK, D. Prof., Dir.
ORTMANN, R. Prof.
FRICK, H. Asst.
SCHNEIDER, R. Asst.

Freiburg i. Brsg., Katharinenstr. 20, Univ. Freiburg, Naturwiss. Mathem. Fak., Zool. Inst.
KOEHLER, O. Prof., Dir.
* LÜDTKE, H. Kustos
* HAUENSCHILD, C. Wiss. Asst.
STÄRK, O. J. Wiss. Asst.
JAHN, Th. Wiss. Asst.

Giessen, Friedrichstr. 24, Anat. Inst.
ROLLHÄUSER, H. Prof.
ROLLHÄUSER(ter HORST), Mrs. J.

Göttingen, Burgstr. 51, Med. Fak., Anat. Inst. der Univ. Göttingen
* BLECHSCHMIDT, E. Prof., Dir.
* GRAUMANN, W. Ob. Asst.
* HINRICHSEN, K. Asst.
STEDING, G.

Göttingen, Berlinerstr. 28, Univ. Göttingen, Mathem. Naturwiss. Fak., Zool., Inst. und Museum
* PIEPHO, H. Prof.
* BÜCKMANN, D.

Hamburg 20, U.K.E. Martinistr. 52, Univ.-Krankenhaus Eppendorf, Anat. Inst. der Univ.
† ZEIGER, K. Dir.
* BAUTZMANN, H. Prof., 1 Prosektor
SCHRÖDER, R. K. P.

* WARTENBERG, H. Wiss. Asst.

Hamburg 36, Holstenwall 24, Inst. für Fischereibiol. der Univ.
* HARDER, W.
* LILLELUND, K.
* HAMDORF, K.
* KOOPS, H.

Heidelberg, Voss-Strasse 3, Inst. für exp. Krebsforsch. der Univ.
* QUERNER, H. Dozent

Heiligenberg (17b), Kreis Ueberlingen/Bodensee, Heiligenberg Inst.
* MANGOLD, O. Prof., Abt.-leiter
* WOELLWARTH, C. von Asst.
* TIEDEMANN, H. Asst.
* TIEDEMANN (WAECHTER), Mrs. H. Asst.
* BECKER, Miss U. Asst.
* WEHRMAKER, A. Asst.
* ZWIRNER, R. Gast

Kiel, Neue Universität, Haus 30, Anat. Inst. der Univ.
BARGMANN, W. Prof., Dir.
* FLEISCHHAUER, K.
* HORSTMANN, E., Prof.

Köln-Lindenthal, Kerpenerstr. 13, Zool. Inst. der Univ.
* KUHN, O. Prof., Dir.
* HARTWIG, H. Asst. Dozent
* ENGLÄNDER, H. Dozent
* KOECKE, H.-U. Asst. Dozent
* ANTON, H. J. Asst.
* VAHS, W. Asst.
* JOHNEN, Miss A. G. Asst.
* WEBER, W. Asst.

Köln-Lindenthal, Gyrhofstr. 17, Inst. für Entwicklungsphysiol.
* HARTE, Miss C. Prof.
* POHLEY, H.-J.
* LÖBBECKE, E.-A.
STANGE, Miss L.

Mainz, Saarstr. 21, Johannes Gutenberg Univ., Zool. Inst.
* ANDRES, G.

Mainz, Botan. Inst. der Univ.
* HACCIUS, Miss B. Prof.

Marburg/Lahn, Robert Kochstr. 6, Anat. Inst. der Univ.
NIESSING, K. Prof., Dir.
* PETRY, G. Prof.
WENDT, G. G. Prof.
* OKSCHE, A. Asst.
MUNSIG, J. Asst.
* PETERS, Th. Asst.
* LIEBER, Miss A. Asst.

Marburg/Lahn (16), Ketzerbach 63, Zool. Inst. der Univ.
SEIDEL, F. Prof., Dir.

München 2, Luisenstr. 14, Zool. Inst. der Univ. München
* SCHNEIDER, D.

München 15, Pettenkoferstr. 11, Anat. Inst. der Univ. München
LANZ, T. von Prof., Dir.
* DINGLER (HAHL), Mrs. E. C. Privatdozent
* DZIALLAS, P. R. Prof.
NEUHÄUSER, G. B. E. Cand. med.

München 15, Thalkirchnerstr. 36, Pathol. Inst. der Univ. München
* WRBA, H. Privatdozent

Münster (Westfalen), Waldeyerstr. 27, Inst. für Humangenetik der Univ.
VERSCHUER, O. Frhr. von Prof., Dir.
* TESTA, I.
* DEGENHARDT, K.-H. Privatdozent

Stuttgart-Hohenheim, Zool. Inst. der Landwirtschaftl. Hochschule
* PFLUGFELDER, O. Prof., Dir.

Tübingen, Württemberg, Spemannstr. 34, Max-Planck-Inst. für Biol.
BEERMANN, W. Dir.
* KÜHN, A. Prof.
* EGELHAAF, A. Asst.
LAVEN, H.

Tübingen, Württemberg, Hölderlinstr. 12, Zool. Inst. der Univ.
* SCHWARTZ, V. Prof.

Tübingen, Württemberg, Anat. Inst. der Univ.
* MERKLE, U. Asst.

Würzburg, Röntgenring 10, Univ. Würzburg, Naturwiss. Fak., Zool. Inst.
* KRAUSE, G. Prof., Dir.
* BIER, K. Privat Dozent

* HUBL, H. Stud. Rat
* SANDER, K. Asst.
FULDNER, D.
Inst. für Angewandte Zool.
* GÖSZWALD, K. Prof., Inst. Vorstand
* KLOFT, W. Asst., Privat Dozent

HUNGARY

Budapest IX, Tüzoltó u. 58, Med. Univ., Inst. of Histol. and Embryol.
* VIGH, B.
* TÖRÖK, L. J.
* GYÉVAI, Mrs. T. A.

Pécs, Dischka u 5, Univ. Med. School, Dept. of Anat.
* SZENTÁGOTHAI, J. Prof.
* SZÉKELY, G.

Tihany, Lake Balaton, Hung. Acad. of Sci., Biol. Research Inst.
* KONOK, I. Prof.

ITALY

Bari, Univ. di Bari, Ist. di. Zool.
LERMA, B. de Prof.

Bari, Policlinico, Fac. of Med., Inst. of human Anat.
* AMPRINO, R. M. Prof., Dir.
* CAMOSSO, Miss M. E. Asst.

Bologna, Via S. Giacomo 9, Ist. di Zool.
* VANNINI, E. Prof., Dir.
* GHIRARDELLI, E. 1st Asst., Prof., Lib. Doc.
* RANZOLI, F. Prof., Lib. Doc.
* STAGNI, Miss A. Asst.
ANDREOLI(PELLEGRINI), Mrs. A. Asst.
GRASSO, M. Asst.
ZAFFAGNINI, F. Asst.
* MASETTI ZANNINI, Miss A. Asst.

Bologna (103), Via Belmeloro 8, Ist. di Anat. comp.
* LEGHISSA, S. Prof., Dir.
* RAUNICH, L. Prof., Guestworker
MANELLI, E. Asst.
ROSSINI, Miss M. C. Asst.
MAZZONI(De CESARE), Mrs. I. Techn.

MINELLI, G. Asst.
RAMBALDI, Miss M. Asst.

Cagliari, Via G. T. Porcell 2, Ist. di Istol. Embriol. Gener.
* BORGHESE, E.

Camerino, Univ. di Camerino, Ist. di Zool.
* URBANI, E. Prof., Dir.
URBANI(MISTRUZZI), Mrs. L. Prof. Inc.
BELLINI, Miss L. Asst.
DE CESARIS(COROMALDI), Mrs. L. V.Asst.
GAETA, Miss I. V.Asst.
ZAPPANICO, Miss. A. V.Asst.

Ferrara, Univ. di Ferrara, Ist. di Anat. Comp.
* RAUNICH, L. Prof.

Ferrara, Via Fossato di Mortara 66, Univ. di Ferrara, Ist. Anat.
* MURATORI, G. Prof., Dir.
BATTAGLIA, G. Asst.
VASCOTTO, A. Asst.
CHIARINI, C. Asst.
CARLI, D. B. Techn.

Firenze, Via Romana 17, Fac. di Sci., Ist. di Anat. Comp.
PADOA, E. Prof.

Frascati (Roma), Div. Biol. del C.N.R.N., Lab. del Sincrotrone
* MONESI, V.

Genova, Via Balbi 5, Univ. di Genova, Ist. di Anat. e Fisiol. comp.
REMOTTI, E. Prof., Dir.

Messina, Ist. Zool. dell'Univ.
* BOLOGNARI, A.

Milano, Via Celoria 10, Univ. di Milano, Fac. di Sci., Ist. di Genet.
* BARIGOZZI, C. Prof., Dir.
* CASTIGLIONI, Miss M. C. Asst.

Ist. di Zool. e Anat. comp.
RANZI, S. Prof., Dir.
CIGADA(LEONARDI), Mrs. M. Asst.
LANZAVECCHIA, G. Asst.
LEONE,V. Asst.
ROCCA, E. Asst.
CITTERIO, P.

Milano, Via Ponzio 7, Fac. di Med. e Chir. dell'Univ. di Milano, Cattedra di Istol, ed Embriol. gener.
* PRETO PARVIS, Mrs. V. Prof.
* RONCORONI, G. Asst.
* PIRIA, F. Asst.

Modena, Via Università 4, Fac. di Sci., Ist. di Zool. e Anat. comp.
REGGIANI, Miss M. P. Asst.
ROMANI, Miss M. L. Asst.
LUGLI, Miss L. Asst.

Napoli, Zoological Station
DOHRN, P. Dir.
TARDENT, P.
GHIRETTI, F.
TOSI, Miss L.
RENZONI, A. Asst.
BRINCKMANN, Miss A.
* CÉAS, Miss M. P.
* HESS, O.

Napoli, Via Mezzocannone 8, Univ. di Napoli, Ist. di Zool.
* LA GRECA, M. Prof.
* SALFI, M. Prof.
* SARA, M. Lib. Doc.

Padova, Via Loredan 10, Fac. di Sci., Ist. di Zool. e Anat. comp.
* D'ANCONA, U. Prof., Dir.
* COLOMBO, G. Asst.
* SABBADIN, A. Asst.
MARCUZZI, G. Lect.
* BATTAGLIA, B. Asst.
* SALA, M. Asst.
* MARIN, G. Asst.

Palermo, Via Archirafi 18, Univ. di Palermo, Ist. di Zool.
* REVERBERI, G. Prof., Dir.
* MINGANTI, A. Asst.
* ORTOLANI, Miss G. Asst.
* MANCUSO, V. Asst.
* D'ANNA, T. Asst.
* FARINELLA(FERRUZZA), Mrs. N. Asst.
* DURANTE, Miss M. Asst.
Research workers:
* FISCHIAROLO, Miss G.
* RESTIVO, Miss F.
* FAGONE, Miss A.
* LA SPINA, Miss R.

Palermo, Via Archirafi 22, Univ. di Palermo, Ist. di Anat. comp.
* MONROY, A. Prof., Dir.
* MAGGIO, Miss R. Asst.
SALVO, A. M. Asst.
* D'AMELIO, V. Asst.
* GIUDICE, G. Asst.
OLIVA, O. A. Techn. Asst.

Pallanza, Ist. di Idrobiologia
MIROLLI, M.
(no embryol. work in progress)

Parma, Università, Ist. di Zool. e Anat. comp.
* SCHREIBER, B. Prof., Dir.

Perugia, S. Pietro, Fac. di Med., Ist. di Biol. gen.
* SPIRITO, A. Prof., Dir.
* CASTIGLI(PITOTTI), Mrs. M. Prof., Inc. Doc.
* BONDI, C. Prof., Lib. Doc.
CENTAMORI, M. Asst.
* LIOTTI, F. S. Asst.
SPEDALETTI, L. Asst.

Perugia, S. Pietro, Fac. di Sci., Ist. di Anat. comp.
* PERRI, T. Prof., Dir.
NOTARNICOLA, L. Asst.

Pisa, Via A. Volta 4, Fac. di Sci., Ist. di Zool. e Anat. comp. dell' Univ.
* BENAZZI, M. Prof., Dir.
* PAPI, F. Asst.
* BENAZZI(LENTATI), Mrs. G.
* NOBILI, R. Asst.
* MANCINO, G. Asst.
* PUCCINELLI, I. Asst.

Pisa, Via Roma 33, Inst. of Anat. and Histoembryol. of the Univ.
* MASSART, C. Prof., Dir.
* PERA, L. Asst. Prof.

Roma, Università di Roma, Semeiotica Medica, Policlinico Umberto I
CONDORELLI, M. Asst.

Roma, Viale Regina Elena 324 (Policlinico), Ist. di Zool. dell'Univ. di Roma
* PASQUINI, P. Prof., Dir.
* PETRUCCI, D. Asst. Prof.

Roma, Via Borelli 50, Univ. di Roma, Fac. di Sci., Ist. di Anat. Comp. „G. B. Grassi"

* STEFANELLI, A. Prof., Dir.
COTRONEI, G. Prof.
* BAFFONI, G. M. Asst.
* ROSSI, A. Asst.
ZACCHEI, A. M. Extr. Asst.
RUSSO-CAIA, S. V. Asst.
BERTOLINI, B. Asst.
MANGILI, G. V. Asst.

Siena, Piazza S. Agostino 4, Fac. di Med.. Ist. di Biol. e Zool. gen.
OMODEO, Prof., Dir.
(no embryol. work in progress)

Torino, Corso Massimo d'Azeglio 52, Fac. of Med., Inst. of human Anat.
LORETI, F. Prof., Dir.
* LEVI, G. L. Prof. (Emer.), Anc. Dir.
* FILOGAMO, G. Aiuto, Prof. Inc. Istol. ed Embriol.
FRANCESCHINI, M. Asst. (Lib. Doc.)
* CANDIOLLO, L. Asst.

Torino, Via Giovanni Giolitti 34, Inst. of Comp. Anat.
* MAZZI, V. Dir.
* GUARDABASSI, Miss A. Asst.

Torino, Via Nizza 52, Ist. di Anat. veterinaria
* GODINA, G. Prof., Dir.
* GOBETTO, A. Asst.
* BARASA, A. Asst.

NETHERLANDS

Amsterdam Z., Rapenburgerstr. 128, Free Calvinistic Univ., Zool. Inst.
LEVER, J. Prof.
VLIJM, L. Asst.
SPRONK, N. Asst.
RICHTER, Miss W. E. Asst.
(no embryol. work in progress)

Amsterdam Z., Pr. Hendriklaan 27, Free Calvinistic Univ., Anat.-Embryol. Lab.
FAASSEN, F. van Dir.
HANSMA, H. Asst.
ROSENDAL, R. Asst.
SCHALEKAMP, M. A. D. H. Asst.
KUYKEN, M. P. A. Asst.
ZWAN, A. van der Asst.

DOKTER, H. J.
STAM, F.
SCHOLTEN, F. C.

Amsterdam O., Mauritskade 61, Municipal Univ. of Amsterdam, Fac. of Med., Anat.-Embryol. Inst., Div. of Exp. Morphol.
* WOERDEMAN, M. W. Prof., Dir. of Inst.
* TRAMPUSCH, H. A. L. Chief Asst., Lect.
* CATE, G. ten Chief Asst., Lect.
* DOORENMAALEN, W. J. van
* JOCHEMS, D. J.
* BORDEN, J. van der
* VERWOERD, C. D. A.
* HARREBOMÉE, Miss A. E.

Amsterdam, Plantage Doklaan 44, Municipal Univ. of Amsterdam, Zool. Lab.
* SLIJPER, E. J. Prof., Dir.

Amsterdam O., Mauritskade 59B, Netherlands Central Inst. for Brain Research
BOK, S. T. Prof., Dir.
* NIEUWENHUYS, R.

Delft, Julianalaan 134, Central Lab. T.N.O.
ISINGS, J.

Groningen, Oostersingel 69, Univ. of Groningen, Fac. of Med., Dept. of Anat. and Embryol.
* ARIËNS KAPPERS, J. Prof., Dir.
* BIJTEL, Miss J. H. Lect.
MOLL, J. Prosector
PROP, N. Chief Asst.
PLEEGING, J. H. Asst.
KATE, Miss J. B. ten

Leiden, 5e Binnenvestgracht 8, Genet. Lab. der Rijks Univ.
* GLOOR, H. J. Prof., Dir.
SOBELS, Miss J. Chief Asst.
SCHARLOO, W. Asst.

Leiden, Wassenaarseweg, Boerhaavekwartier, Univ. of Leyde, Fac. of Med., Anat.-Embryol. Lab.
* DANKMEIJER, J. Prof., Dir.
LANDSMEER, J. M. F. Prosector
* DEKKER, Miss A. Prosector

* LOS, J. A. Prosector
* BROUWER, P. J. Prosector
* INGEN, Miss H. C. van Prosector
* GOEDBLOED, J. F. Asst.
* SNELLEN, H. A. Prof. of Cardiol.
* MIETE, M.

Leiden, Rijnsburgerweg 10, Boerhaavekwartier, Univ. of Leyde, Fac. of Med., Lab. for Cytol. and Exper. Histol.
* GAILLARD, P. J. Prof., Dir.
* ZAAIJER, Miss J. J. P. Conservator
* ALKEMADE, Miss E. C. M.

Utrecht, Bekkerstraat 141, Univ. of Utrecht, Veter. Anat. and Embryol. Inst.
* MEIJLING, H. A. Prof., Dir.
SCHOTSMAN, J. G. W.
* WIERTZ(HOESSELS), Mrs. E. L. M. J.
KREDIET, P.

Utrecht, Alex. Numankade 93, Univ. of Utrecht, Lab. for Veter Physiol.
* ROMIJN, C. Prof.

Utrecht, Janskerkhof 2, Hubrecht Lab., Intern. Embryol. Inst.
* NIEUWKOOP, P. D. Prof., Dir.
* FABER, J. 1st Asst.
* BOTERENBROOD, Miss E. C. Asst.
* LEUSSINK, J. A. Asst.
Guest-workers, students:
* BEAUPAIN, R. R.
* GRINTEN, S. J. v. d.
Guest-workers, 1959/60:
* HARA, K. (Nagoya)
* SHAH, R. V. (Baroda)
* STEDING, G. (Göttingen)
AZOUBEL, R. (Recife)
* MICHAEL, M. I. (Alexandria)
RZEHAK, K. (Kraków)
* SZÉKELY, G. (Pécs)

Utrecht, Janskerkhof 3, State Univ. of Utrecht, Fac. of Sci., Zool. Lab.
* RAVEN, Chr. P. Prof., Dir.
* KAMER, J. C. v. d. Lect.

* GEILENKIRCHEN, W. L. M. Asst.
* VERDONK, N. H. Asst.
* UBBELS, Miss G. A. Asst.
* TIMMERMANS, Miss L. P. M. Asst.
LABORDUS, V. Asst.
* NIJENHUIS, E. D.

Utrecht, Janskerkhof 3, Centrum voor Electronenmicroscopie
* BRETSCHNEIDER, L. H. Prof.
* ELBERS, P. F.
* RECOURT, A.

Utrecht, Janskerkhof 3, State Univ. of Utrecht, Med. Fac., Anat.-Embryol. Lab.
† MIJSBERG, W. A. Prof.
* DETH, J. H. M. G. van Prof., Chief Asst.
HUIZINGA, J. Chief Asst.
SNELL, C. A. R. D. Prof., Chief Asst.
* LIMBORGH, J. van Asst.
TACOMA, J. Asst.
THIO, T. T. Asst.
* BOERSMA, W. Asst.
CHATIGNIER, K. du Asst.

Utrecht, Stationsstraat 9, State Univ. of Utrecht, Genet. Inst.
RÜMKE, C. L. Prof., Dir.

NORWAY

Oslo, Univ. of Oslo, Anat. Inst.
* JANSEN, J. Dir.
* HARKMARK, W. Prosector

Oslo, Blindern, Univ. of Oslo, Dept. of Zool.
† RUUD, Miss G.
JOHANSSON, A. S. Prof.
(no embryol. work in progress)

N. IRELAND (ULSTER)

(Vid. UNITED KINGDOM)

POLAND

Kraków, św. Anny 6, Zakład Anat. Porównawczej U.J. im H. Hoyera
* GRODZIŃSKI, Z. Prof., Head of Inst.
* BYCZKOWSKA(SMYK), Mrs. W.

* SZUBIŃSKA (KILARSKA), Mrs. B. S.
Kraków, St. Anne 6, Jagiellonian Univ., Fac. of Sci., Zool. Dept.
SMRECZYŃSKI, S. Head of Dept.
* WĘGLARSKA, Miss B. Asst.
* KRZYSTOFOWICZ, Miss A. Asst.
* JURA, Cz. Asst.
Kraków, ul. Kopernika 7, Acad. of Med., Biol. and Embryol. Inst.
JURAND, A. Doc.
RZEHAK, K.
Inst. of Exper. Zool.
ROGUSKI, H.
MAROŃ, K.
JORDAN, M.
SKOWRON, S.
Łódź, Narutowicza 60, Acad. of Med., Inst. of Histol. & Embryol.
* BAGIŃSKI, S. Prof., Dir.
BORSUK, Mrs. I. Lect.
RUDEWICZ, Mrs. Cz. Asst.
* FORTAK, W. Asst.
* KUŃSKI, H. Asst.
JEDRZEJEWSKA, Mrs. H. Lect.
SIWIŃSKA, Mrs. D. Asst.
Warszawa, ul. Chalubińskiego 5, Acad. of Med., Inst. of Histol. and Embryol.
* OSTROWSKI, K. Dir.
† ZWEIBAUM, J. Prof.
Warszawa, Krakowskie Przedmieście 26/28, Warsaw Univ., Dept. of Cytol.
* PERKOWSKA, Mrs. E. MOSER-
* MATUSZEWSKI, B.
Zakład Embriologii U.W.
* BILEWICZ, S. Prof. extraord.
Warszawa, ul. Grochowska 272, Veter. Fac., Inst. of Histol. and Embryol.
* KONOPACKA, Mrs. B. Prof.
KRAIŃSKA, Mrs. M. K.
* BIELAŃSKA (OSUCHOWSKA), Mrs. Z.
* SUMIŃSKI, E. H.

* SZAŃKOWSKA, Z.
Wrocław, ul. Chałubinskiego 6a, Akad. Medyczna, Zakład Histol. i Embryol.
SEMBRATOWA, Mrs. Z. Prof., Dir.
Wrocław, ul. Sienkiewicza 21, Inst. Zool. Uniw. B.B. we Wrocławiu, Zakład Anat. Porównawczej
SZARSKI, K. W. Dir.
ORSKA, Miss J. Adj. (Asst. Lect.)
WINOWSKA, Mrs. J. Sr. Asst.
ROMANKOWOWA, Mrs. A. Asst.
Zakład Zool. Ogólnej
* SEMBRAT, K. Prof., Dir.
* RADECKA, Mrs. E. ERDMAN Adj.
* PASCHMA, M. Adj.
* KIEŁBÓWNA, Miss L. Asst.
* NOWAKÓWNA, Miss J. Asst.
* KOŚCIELSKI, B. Asst.
* GAWRONÓWNA, Miss M. Asst.
Wrocław, ul. Bujwida 9, Akad. Med., Zakład Biol. Ogólnej
* STUCHLY, Z. Prof.
Zabrze, Rokitnica, Silesian Acad. of Med., Dept. of Gener. Biol.
* WRÓBLEWSKI, R. Head of Dept.
* MICHAŁOWSKI, J. Asst.
* CHACHULSKA, W. Asst.
* BELKA, A. Asst.
* NOWAK, A. Asst.
* PLUTA, E. Asst.
CZAPSKA, D. Asst.
* KUCIAS, J. Asst.

PORTUGAL

Coimbra, Fac. de Med., Inst. de Histol. e Embriol.
TAVARES DE SOUSA, A. Prof.
(no embryol. work in progress)
Lisboa, Avenida 28 de Maio, Fac. de Med., Inst. de Histol. e Embriol.
XAVIER MORATO, M. J. Prof., Dir.
GOMES FERREIRA, J. V.

TEIXEIRA, Mrs. I.
(no embryol. work in progress)
Lisboa, Univ. de Lisboa, Museu e Lab. Zool. de Ciencias
* FONSECA SACARRÃO, G. da Prof.

RUMANIA

Cluj, Strada 1 mai, Inst. Medico-Farmaceutic, Catedra de Biol.
* PREDA, V. Prof.
Timişoara, Bul. Mihai Viteazul 24, Acad. Republ. Populare Romîne, Baza de cercetări Stiinţifice Timişoara
* MENKES, B. Prof.

SCOTLAND

(Vid. UNITED KINGDOM)

SPAIN

Barcelona, Dr. Amigant 14, Inst. Biol. de Sarriá
PUJIULA, J. S. I.
Madrid, Ciudad Universitaria, Fac. de Med., Lab. de Anat. y Embriol.
* ORTS LLORCA, F. Prof., Dir.

SWEDEN

Göteborg C, Medicinaregatan 5, Univ. of Gothenburg, Dept. of Histol.
* LØVTRUP, S.
Göteborg, Univ. of Gothenburg, Dept. of Anat.
* BENGMARK, S.
Göteborg C, Postgatan 35, Univ. of Gothenburg, Zool. Inst.
* BERGQUIST, H.
Lund, Biskopsgatan 7, Tornblad Inst. of comp. Embryol.
GLIMSTEDT, G. Prof., Dir.
* KÄLLÉN, B. Docent
KRABBE, K. H.
* RÜDEBERG, S. I. Amanuensis
Lund, Univ. of Lund, Dept. of Anat.
* FORSBERG, J. G.
* LINDH, J.
Zool. Inst., Embryol. Dept.
* DAHL, E. Prof.
* ÅKESSON, B. Docent
* ENEMAR, E. A. W.
* MEURLING, P. B.
* MECKLENBURG, C. L. F. C.
Zoophysiol. Inst.
* AGRELL, I. P. S. Prof.
* EMANUELSSON, H.
LINDH, N. O.
CHRISTENSSON, E.
OHLSSON, T.
THORLACIUS, Ö.
BRANTMARK, B.
Stockholm, Rådmansgatan 70 A, Univ. of Stockholm, Zootom. Inst.
* SILÉN, L. K. P. Prof., Dir.
* PEHRSON, G. T. Prof.
* OLSSON, R. Lect.
* HAGELIN, L. O. Asst.
Guest-workers:
* BERTMAR, G.
* FRIDBERG, G.
* HYLBOM, J. R.
* NYHOLM, K. G.
Stockholm Va., 16 Norrtullsgatan, Fac. of Sci. and Mathem., Wenner-Grens Inst. for exper. Biol.
* RUNNSTRÖM, J. A. M. Prof. (Emer.)
* LINDBERG, N. O. H. Prof., Dir.
* GUSTAFSON, T. Assoc. Prof.
* HULTIN, J. M. T. Asst. Prof.
* IMMERS, J. Asst.
BÄCKSTRÖM, S. Asst.
* PERLMANN, H. P. Asst.
* HAGSTRÖM, B. Asst. Prof.
TUDGE, Miss M.
LÖNNING, Miss S.
Stockholm 50, Statens Veterinärmedic. Anstalt, Dept. of Parasitol.
* MONNÉ, L. Assoc. Prof.
Stockholm 50, Swedish Museum of Nat. Hist., Vertebrate Dept.
* JOHNELS, A. G.
Stockholm 60, Solnavägen 1, Karolinska Inst., Dept. of Histol.
* HÄGGQVIST, G. Prof., Dir.
* NORBERG, O. V. Prof. Emer.
* GYLLENSTEN, L. J. W. Assoc. Prof.
FRIBERG, U. Docent
WERSÄLL, J. Docent
Uppsala, Univ. of Uppsala, Anat. Inst.

REXED, B. Prof.
(no embryol. work in progress)
Zool. Inst.
* HÖRSTADIUS, S. Prof., Dir.
* JÄGERSTEN, K. G. M. Prof.
* HOLM, K. Å. Docent
(Curator of the Museum)
* FRANZÉN, Å. S. Docent
* JACOBSON, D. C.-O.
* GIDHOLM, L.
Inst. of Zoophysiol.
* LINDAHL, P. E. Prof., Dir.
* KIHLSTRÖM, J.-E.
* SUNDELL(THORSELL), Mrs. G.
* SUNDELL, L.-E.
* BODIN, N.-O.
* THUNQVIST, L. O.
* NORDLING, E. G. V.
* BRATTSAND, R. L.
* UHLIN, G.
* WEDIN, K. H.

SWITZERLAND

Basel, Pestalozzistr. 20, Anat. Inst.
SCHENK, R. Prof.
LUDWIG, K. S. Priv. Doc.
Basel, Rheinsprung 9, Zool. Anstalt der Univ.
* PORTMANN, A. Prof., Dir.
* GEIGY, R. Prof.
* NÜESCH, H. Prof.
STINGELIN, W.
Basel, Socinstr. 57, Tropeninst.
* GEIGY, R. Prof., Dir.
Bern, Sahlistr. 8, Univ. Bern, Zool. Inst.
BALTZER, F. Prof. (Emer.)
LEHMANN, F. E. Prof., Dir.
ROSIN, S. Prof.
(Abt. f. Genet.)
LÜSCHER, M. Prof.
(Abt. f. Zoophysiol.)
WEBER, R. Asst.
NEF, W.
ENGELMANN, F.
BENZ, G. A. Asst.
Bern, Bühlstr. 26, Univ. Bern, Med. Fak., Anat. Inst.
* HINTZSCHE, E. Prof., Dir.
BLUNTSCHLI, H.
Prof. (Emer.), Kust.
* STRAUSS, F. a.o. Prof., Pros.
FEREMUTSCH, K. Priv. Doz.
Bern, Museum d'Histoire Naturelle
* HUBER, W.
Bern, Waldau, Med. Fak., Hirnanat. Inst. der psychiatr. Univ.-klinik
* GRÜNTHAL, E. Prof., Dir.
* PILLERI, Y. Asst.
Freiburg, Zool.-vergl. Anat. Inst. der Univ.
KÄLIN, J. Prof.
Genève, 20 Rue Ecole de Méd., Univ. de Genève, Inst. d'Anat.
* BAUMANN, J. A. Prof., Dir.
* WEBER, A. Dir. du Lab. de Neurohistol.
BAUD, C. A. Prof., Chef de Trav.
* GALLERA, J. 1er Asst.
Genève, Ecole de Méd., Inst. d'Histol. et d'Embryol.
ROUILLER, Ch. Prof.
(no embryol. work in progress)
Genève, Rue de Candolle, Univ. de Genève, Inst. de Zool. et d'Anat. comp.
GUYÉNOT, E. Dir.
* KIORTSIS, V. Chargé de cours
PONSE, Miss K.
DROIN, Miss A.
MERMOD, Miss C. L.
RAHMANI, Miss T.
Zürich, Universitätsstr. 2, Zool. Inst. der Eidg. Techn. Hochschule
* ULRICH, H. Prof., Dir.
* KROEGER, H.
Zürich 6, Künstlergasse 16, Univ. Zürich, Naturw. Fak., Zool.-vergl. Anat. Inst.
* HADORN, E. Prof., Dir.
* STEINER, H. Prof.
* ANDERS, G.
* CHEN, P. S.
* GEIGER, H. R.
* NISSEN, Th.
* OELHAFEN, F. H.
* URSPRUNG, H.
Zürich 7, Gloriastr. 19, Univ. Zürich, Med. Fak., Anat. Inst.
TÖNDURY, G. Prof., Dir.
THEILER, K. Asst.

UNITED KINGDOM (U.K.)

England

Birmingham 15, Edgbaston, Birmingham University,
Dept. of Zool. and Comp. Physiol.
FINLAYSON, L. H.
COHEN, J.
The Med. School, Dept. of Anat.
ZUCKERMAN, S. Prof., Dir.
GREEN, S. H. Lect.
MANDL, Miss A. M. Asst.
* EAYRS, J. T.
THOMPSON, A. P. D.
* GLASS, A.
* ROGERS, A. W.
* LISOWSKI, F. P.
* DARLINGTON, D.

Bristol 8, Univ. of Bristol, Dept. of Zool.
* HARRIS, J. E. Prof.
* WHITING, H. P.

Cambridge, Downing St., Univ. of Cambridge,
Med. School, Anat. Dept.
* BOYD, J. D. Prof., Dir.
* HUGHES, A. F. W.
* MILLEN, J. W.
SHUTE, C. C. D.
LEVER, J. D.
* FORD, E. H. R.
* WOOLLAM, D. H. M.
Dept. of Biochemistry
* WILLIAMS, J.
Univ. Museum of Zool.
GRAY, Sir J. Prof., Head
ROTHSCHILD, Lord
SMITH, S.
* SHAFFER, B. M.

Cambridge, Gonville and Caius Coll.
NEEDHAM, J.

Cambridge, Strangeways Res. Lab.
FELL, Miss H. B.

Harwell, Berkshire, Atomic Energy Res. Establishment, Radiobiol. Res. Unit
CARTER, T. C.
GODFREY, J.
LYON, Miss M. F.
McKENDRICK, Miss M. E.
PHILLIPS, Miss R. J. S.
SEARLE, A. G.

Kent, Near Ashford, Wye Coll.
* EDE, D. A.
* KELLY, W. A.
ROGERS, Miss A.

Liverpool 3, Univ. of Liverpool, Dept. of Anat.
* HARRISON, R. G. Prof.
* MACMILLAN, E. W.
* CLEGG, E. J.
* HARRISON, G. A.
* BROOKES, M.

London E. 1, Turner St., Univ. of London, London Hosp. Med. Coll., Anat. Dept.
* HARRISON, R. J. Head of Dept.
JOHNSON, F. R. Reader
TOMLINSON, J. D. W. Sen. Lect.
* HARRIS, J. W. S. Lect.
* YOUNG, B. A. Lect.

London, E. C. 1, Charterhouse Square, St. Bartholomew's Hosp. Med. Coll.,
Dept. of Zool. and Comp. Anat.
* BELLAIRS(MORGAN), Mrs. M. R.

London N.W. 1, Royal College St., Roy. Veter. Coll.
* BISHOP, M. W. H.

London N.W. 1, Regent's Park, Bedford Coll., Dept. of Zool.
* INCE, Miss F. E.
* BAKER, Miss B. I.

London N.W. 7, Mill Hill, Nat. Inst. for Med. Research
* AUSTIN, C. R.
* EDWARDS, R. G.

London S.E. 1, St. Thomas' Hosp. Med. School, Dept. of Anat.
DAVIES, D. V. Prof.
BARNETT, C. H.

London S. E. 1, Guy's Hosp., Med. School, Dept. of Biol.
* BAXTER, E. W.

London S.W. 1, Udall St., Vincent Square, Westminster Med. School, Research Labs.
O'CONNOR, R. J.

London S.W. 1, 19 Belgrave Square, The Nature Conservancy
* FRAZER, J. F. D.
London W. 1, Middlesex Hosp., Med. School
* HARRIS, F. T. C.
Dept. of Anat.
SILVER, P. H. S.
GOULD, R. P.
* BEAM, J. R.
London W. 2, Norfolk Place, Paddington, St. Mary's Hosp. Med. School, Biol. Dept.
FOSTER, C. L. Head of Dept.
FISK, A.
ALLANSON(BAXTER), Mrs. M.
London W.C. 1, Gower St., Univ. Coll. of London,
Dept. of Embryol.
* ABERCROMBIE, M. Reader
* DEUCHAR, Miss E. M. Lect.
* CURTIS, A. S. G.
* OLDFIELD, Miss F. E.
* CHAYTOR, D. E. B.
* PERTUSA, J.
Dept. of Genet.
* GRÜNEBERG, H. Prof.
* TRUSLOVE, Miss G. M.
Dept. of Zool. and Comp. Anat.
MEDAWAR, P. B. Jodrell Prof.
* NEWTH, D. R. Lect.
BRENT, L. Lect.
* FOX, H. Res. Asst.
FRASER, Miss E. A. Hon. Res. Assoc.
* FLYNN, T. T. Emer. Prof., Hon. Res. Assoc.
* BILLETT, F. S. Hon. Res. Asst.
* HAMILTON, Miss L.
London W.C. 2, 62-65 Chandos Place, Univ. of London, Charing Cross Hosp., Med. School,
Dept. of Anat.
* HAMILTON, W. J. Prof., Dir.
* GLENISTER, T. W. Lect.
* BACKHOUSE, K. M. Lect.
* ROSS, Miss J. R. W.
London W.C. 2, Strand, King's Coll.
MANTON, S. M.
Manchester, Univ. of Manchester, Dept. of Anat.
* ASHLEY, G. T.
Manchester 20, Withington, Christie Hosp. & Holt Radium Inst., Tissue Culture Lab.
* THOMASON, Miss D.
Newcastle upon Tyne, Univ. of Durham, King's Coll., Med. School, Dept. of Anat.
* CAUNA, N.
Oxford, Univ. Museum,
Dept. Zool. and Comp. Anat.
* FISCHBERG, M.
* NEEDHAM, A. E.
* BLACKLER, A. W. C.
* GURDON, J. B.
* BANTOCK, C. R.
* BEESON, Miss G. E.
* KIRBY, D. R. S.
* WALLACE, H.
Dept. of Human Anat.
* DICK, D. A. T.
Sheffield, Univ. of Sheffield,
Fac. of Med.,
Dept. of Anat.
* DAVIES, F. Prof.
* MARTIN, B. F. Sr. Lect.
* KING, T. S. Lect.
* McMINN, R. M. H. Lect.
* HARRIS, P. F.
Dept. of Zool.
CHESTER JONES, I. Prof.
* FRANCIS, E. T. B. Reader in Vert. Zool.
* HIGHNAM, K. C. Lect. in Zool.

N. Ireland (Ulster)

Belfast, Queens Univ., Dept. of Zool.
* PANTELOURIS, E. M.

Scotland

Aberdeen, Marischal Coll.,
Dept. of Anat.
* BULMER, D.
* DICKSON, A. D.
Edinburgh 8, Teviot Row, Univ. New Buildings, Univ. of Edinburgh,
Dept. of Anat.
* MUIR, A. R.

* PETERS, A.
Edinburgh 9, West Mains Road, King's Buildings,
Inst. of Anim. Genet. & Univ. Dept. of Genet.
* WADDINGTON, C. H. Prof., Dir.
* BEATTY, R. A. Pri. Sc. Off. (A.R.C. Staff)
* CLAYTON (FREEDMAN), Mrs. R. M. Lect.
* SELMAN, G. G. Asst. Lect.
LUCEY, E. C. A. (Cinematography)
* SIRLIN, J. L.
* PERRY, Miss M. M.
* McLAREN, Miss A.
Edinburgh 9, West Mains Road,
Univ. of Edinburgh, Dept. of Zool.
* SWANN, M. M. Prof., Dir.
* HALE, L. J. Lect.
* JONES, B. M. Lect.
* KILLE, R. A. Lect.
* MITCHISON, J. M. Lect.
* TUFT, P. H. Lect.
* MITCHISON, N. A.
St. Andrews, The University,
Bell Pettigrew Museum, Dept. of Nat. Hist.
CALLAN, H. G. Prof.
(no embryol. work in progress)

Wales

Bangor, Caernarvonshire, Univ. Coll. of N. Wales,
Dept. of Zool.
THOMPSON, T. E.
A.R.C. Unit. of Embryol.
* BRAMBELL, F. W. R. Prof., Dir.
* HEMMINGS, W. A. Res.
* HALLIDAY, R. Res.
* MORRIS, I. G. Res.
Menai Bridge, Anglesey, Univ. Coll. of N. Wales, Marine Biol. Station
* CRISP, D. J. Dir.
* JONES, W. E.
* BURDON-JONES, C.
AUSTIN, A. P.
Swansea, Glamorganshire, Singleton Park, Univ. Coll. of Swansea, Dept. of Zool.
KNIGHT-JONES, E. W. Prof.
NAYLOR, E.
MacFADYEN, A.

U.S.S.R.

Moscow, V-71, 33 Lenin Avenue,
Inst. of Animal Morphol. of the Acad. of Sci. of the U.S.S.R.
CHROESJTSJOV, G. K. Prof., Dir.
* DRAGOMIROV, N. I. Prof.
* POLEZHAEV, L. V. Prof.
SMIDT, G. A. Prof.
D.P. Filatov Lab. of Exp. Embryol.
* ASTAUROV, B. L. Prof., Head
Senior Research Workers:
* DETTLAFF, Mrs. T. A. Prof.
* LOPASHOV, G. V. Prof.
* GINSBURG, Mrs. A. S.
Research Workers:
* BEDNJAKOVA, Mrs. T. A.
* STROËVA, Miss O. G.
* IGNATJEVA, Mrs. G. M.
* VEREJSKAJA, Miss V. N.
* ZOTIN, A. I.
GINZBURG, G. I.
RAMENSKAIA, Mrs. G. P.
Lab. of Ecol. Embryol.
KRIŽANOVSKY, S. G. Prof., Head
Lab. of Gener. Embryol.
MATVEJEV, B. S. Prof., Head

YUGOSLAVIA

Sarajevo, Fac. de Méd., Inst. d'Histol. et d'Embryol.
MILIN, R. Prof., Head
Zagreb, Salata, Fac. de Méd., Inst. de Biol.
SKREB, N. Docent
LEVAK, B. Asst.

LIST OF SUBJECTS
with Names of Investigators
(arranged according to organ systems and taxonomic groups)

GENERAL DIVISION

CLASSIFICATION INTO GENERAL RUBRICS

I Descriptive and comparative embryology
II Experimental developmental morphology
III Physiology of development
IV Development and genetics
V Development and pathology
VI Regeneration
VII Metamorphosis
VIII Experimental developmental morphology of plants

CLASSIFICATION OF TAXONOMIC GROUPS AND SPECIAL ORGAN-SYSTEMS (to be used for rubrics I-VII)

Taxonomic subdivision of animal kingdom

EV **Evertebrata**
P Protista
A Porifera
B Coelenterata
C Vermes, Onychophora, Tardigrada, Linguatulida
D Arthropoda
E Mollusca
F Bryozoa, Entoprocta, Brachiopoda, Hemichordata, Chaetognatha
G Echinodermata
H Urochordata, Cephalochordata
V **Vertebrata**
AN **Anamnia**
I Pisces
J Amphibia
AM **Amniota**
K Reptilia
L Aves
M Mammalia

Subdivision of special organ systems

1 Integument
a general subjects
b exo-skeleton
c teeth
d hair, horns, nails
e feathers
f sense organs
g glands
h mammae
i pigment cells and patterns

2 Nervous system
- a general subjects
- b central nervous system
  - 1 brain
  - 2 spinal cord
- c accessory organs
  - 1 paraphysis
  - 2 parietal organ
  - 3 pineal body
  - 4 hypophysis
- d ganglia
  - 1 cephalic ganglia
  - 2 spinal ganglia
- e nerves
  - 1 cephalic nerves
  - 2 spinal nerves
- f para- and sympathetic and intramural nervous system
  - 1 para- and sympathetic nervous system
  - 2 intramural nervous system
- g meninges

3 Special sense organs
- a nasal organ
- b eye
  - 1 eye
  - 2 lens
- c ear
- d lateral sense organs

4 Skeleton
- a general subjects
- b embryonic temporary endo-skeleton
- c skull and visceral skeleton
- d truncal skeleton
- e skeleton of extremities
- f joints

5 Muscular system
- a general subjects
- b skeletal muscles (head, trunk and tail)
- c visceral muscles (head and trunk)
- d muscles of extremities

6 Alimentary tract
- a general subjects
- b mouth- and pharyngeal cavities
- c intestinal tract
- d proctodaeum
- e salivary glands
- f liver
- g pancreas

7 Respiratory organs
- a general subjects
- b external gills
- c internal gills

d lungs and larynx
e air-bladder

8 Heart, vascular system and blood
a general subjects
b heart
c/d arterial and venous system
e capillary system
f blood

9 Coelomic cavities and endothelia, lympathic system and connective tissue
a/b coelomic cavities and endothelia
c lympathic system
d connective tissue

10 Urogenital system and sexual differentiation
a general subjects
b/c kidneys; nephric ducts and bladder
d/e/f gonads (ovary and testis), genital tract and accessory glands
g sexual differentiation

11 Endocrine glands
a general subjects
b hypophysis
c thymus
d thyroid gland
e parathyroid glands
f gonads
g adrenals
h pancreas

I. DESCRIPTIVE AND COMPARATIVE EMBRYOLOGY

SUBDIVISION

1 Theoretical problems and general questions
2 Methods and techniques
3 General subjects (asexual development, reproduction, etc.)
4 Initial development
a General subjects
b Primordial germ cells
c Gameto-, ovo- and spermatogenesis
d Maturation
e Ovulation and oviposition
f Activation and fertilization
g Parthenogenesis
5 Cleavage and mitosis
a Cleavage
b Mitosis
6 Further development of Invertebrates
EV Evertebrata
P Protista
A Porifera
B Coelenterata
C Vermes, Onychophora, Tardigrada, Linguatulida
D Arthropoda

E Mollusca
F Bryozoa, Entoprocta, Brachiopoda, Hemichordata, Chaetognatha
G Echinodermata
H Urochordata, Cephalochordata

7 Further development of Vertebrates
a General investigations
1 General sujects
2 Complete development
3 Partial development
4 Implantation and placentation
b Early development, gastrulation, etc.
1 Early development
2 Gastrulation and formation of germ layers
3 Development of foetal membranes
c Neurulation, etc.
1 Neurulation (s.s.)
2 Development of neural crest
3 First larval development
d Development of part of the organism
1 Head
2 Extremities
3 Tail
e Development of special organ-systems
(Cf. general subdivision p. 173—175)
f Histo- and cytogenesis

8 Growth and differentiation (Invertebrates and Vertebrates)
a Growth
a/b Growth and differentiation
b Differentiation

1 Theoretical problems and general questions

Testa, I. — b M

2 Methods and techniques

Clark, H. — c L

3 General subjects

(asexual development, reproduction, etc.)

Nobili, R. — a C
Papi, F. — a C
Ulrich, H. — b D
Ghirardelli, E. — a F
Harvey, Mrs. E. B. — c G
Gilbert, P. W. — a I
Te Winkel, Miss L. E. — a I
Gilani, S. H. — a J
Arslan, M. — a M
Prasad, M. R. N. — a M
Qureshi, W. H. — a M

4 Initial development

a General subjects

Puccinelli, I. — a C
Fautrez (Firlefyn), Mrs. N. J. — a D
Shulov, A. — c D
Harvey, Mrs. E. B. — f G
Grodziński, Z. — c I
Ruch, J. V. — a I
Szubińska (Kilarska), Mrs. B. S. — a I
Zahnd, J. P. — c I
Dollander, A. — c J
Wartenberg, H. — a J
Zahnd, J. P. — c K
Dollander, A. — c M

b Primordial germ cells

Stagni, Miss A. — b C
Ghirardelli, E. — a F
Follenius, E. and Vivien, J. H. — a I

Sembrat, K. — b J
Bellairs (Morgan), Mrs. M. R. — b L

c Gameto-, ovo- and spermatogenesis

Kemp, N. E. — c EV+V
Franzén, Å. S. — a EV
Benazzi (Lentati), Mrs. G. — a C
Masetti Zannini, Miss A. — a C
Stagni, Miss A. — b C
Chishima, K. — a D
Colombo, G. — a D
Geigy, R. — b D
Greca, M. La — a D
Matuszewski, B. — a D
Bolognari, A. — a E
Arndt, E. A. — a I
Kanoh, Y. — a I
Zahnd, J. P. — b I
Dollander, A. — d J
Frazer, J. F. D. — a J
Kanoh, Y. — a J
Zahnd, J. P. — b K
Austin, C. R. — a M
Bishop, M. W. H. — a M
Butler, H. — a M
Cartier, R., Moricard, R. and Hinglais (Guillaud), Mrs. N. — a M
Merkle, U. — a M

d Maturation

e Ovulation and oviposition

Alden, R. H. — a M
Strauss, F. — a M

f Activation and fertilization

Benazzi (Lentati), Mrs. G. — a C
Colwin, A. L. and Colwin, Mrs. L. H. — a C
Colwin, A. L. and Colwin, Mrs. L. H. — a G
Endo, Y. — a G
Malamed, S. — a G
Colwin, A. L. and Colwin, Mrs. L. H. — a H
Ginsburg, Mrs. A. S. — a I
Kanoh, Y. — a I
Kanoh, Y. — a J
Austin, C. R. — a M
Bishop, M. W. H. — a M

g Parthenogenesis

5 Cleavage and mitosis

Davis, Miss R. J. — a I

a Cleavage

Harris, F. T. C. — a
Balinsky, B. I. — a G
Harvey, Mrs. E. B. — e G
Salfi, M. — a H
Balinsky, B. I. — a I

b Mitosis

Swann, M. M. — b P
Weisz, P. B. — b P
Weber, W. — a J
Weisz, P. B. — b J
Corliss, C. E. — a M
Schinckel, P. G. — b M
Weisz, P. B. — b M

6 Further development of Invertebrates

EV Evertebrata

Mancuso, V. — b EV

P Protista

Weisz, P. B. — a P

A Porifera

Chishima, K. — c A
Sara, M. — a A

B Coelenterata

Hale, L. J. — a B
Sembrat, K. — a B
Stagni, Miss A. — a B

C Vermes, Onychophora, Tardigrada, Linguatulida

Åkesson, B. — a, b C
Bookhout, C. G. — a C
Gidholm, L. — a C
Hylbom, J. R. — a C
Jägersten, K. G. M. — a C
Masetti Zannini, Miss A. — a C
Monné, L. — a C
Nyholm, K. G. — a, b C
Ogren, R. E. — a, b C
Paschma, M. — a C
Puccinelli, I. — a C
Ranzoli, F. — b C

D Arthropoda

Amy, R. L. — b D
Banerjee, B. — a D
Battaglia, B. —a, b D

Bergquist, H. — b D
Bookhout, C. G. — b D
Caspari, E. W. — b D
Chishima, K. — a D
Colombo, G. — b D
Dahl, E. — a D
Geigy, R. — b D
Holst Christensen, P. J. — a, b D
Ichikawa, A. — a D
Ito, T. — b D
Krause, G. —c D
Krzysztofowicz, Miss A. — a D
Martin, Miss B. A. — a D
Miya, K. — a, b D
Nüesch, H. — c D
Oelhafen, F. H. — a D
Perry, Miss M. M., Selman, G. G. and Waddington, C. H. — c D
Pflugfelder, O. — d D
Portmann, A. — a D
Poulson, D. F. — a D
Rappaport, R. Jr. — b D
Rutschky, C. W. — a D
Sander, K. — a D
Schoeller, Miss J. — b D
Schwartz, V. — a D
Shiino, S. M. — a D
Stout, Miss V. M. — a, b D
Ulrich, H. — b D
Yoshikura, M. — a D

E Mollusca

Burdon-Jones, C. — a E
Cather, J. N. — a E
Fonseca Sacarrao, G. da — a, b E
Ince, Miss F. E. — a E
Portmann, A. — d, e E
Ranzoli, F. — d E

F Bryozoa, Entoprocta, Brachiopoda, Hemichordata, Chaetognatha

Burdon-Jones, C. — a F
Ghirardelli, E. — a F

G Echinodermata

Balinsky, B. I. — a G
Baltus, Miss E. J. — a G
Moore, A. R. — a G
Ubisch, L. v. — a, b G

H Urochordata, Cephalochordata

Brewin, B. I. — a, b H

Olsson, R. — b H
Sabbadin, A. — b H
Salfi, M. — a H
Silén, L. K. P. — a H

7 Further development of Vertebrates

a General investigations

General subjects

Ashley, G. T. — a V
Gilbert, P. W. — b I
Strahan, R. — a I
Chishima, K. — b J
Gilani, S. H. — a J
Karasaki, S. — b J
Moore, J. A. — b J
Perry, Miss M. M., Selman, G. G. and Waddington, C. H. — c J
Sumiński, E. H. — a J
Dufaure, J. P. — a K
Islam, A. — b K
Bagnara, J. T. — b L
Spratt, N. T., Jr. — e L
Austin, C. R. — a M
Bishop, M. W. H. — a M
Degenhardt, Mrs. K. - H. — a M
Latimer, H. B. — a M
Nakayama, T. — b M
Nicholas, J. S. — a M
Qureshi, W. H. — a M
Swartz, G. E. — a M
Testa, I. — b M

Complete development

Baxter, E. W. — a I
Cambar, R. — f I
Damas, H. F. C. —a I
Gilbert, P. W. — b I
Jager, B. de — a I
Brahma, S. K. — d J
Campenhout, E. van — c K
Yntema, C. L. — d K
Arslan, M. — a M
Flynn, T. Thomson — c M

Partial development

Michael, M. I. and Sedra, S. N. — b J
Volpe, E. P. — d J
Lutz, H. — a L
Butler, H. — a M

Implantation and placentation

Alden, R. H. — a M
Backhouse, K. M. — b, c M
Bartelmez, G. W. — a M
Böving, B. G. — a, b M
Boyd, J. D. and Hamilton, W. J. — a M
Flynn, T. Thomson — b M
Gitlin, M. — c M
Glenister, T. W. — b M
Hamilton, W. J. and Harrison, R. J. — b M
Harrison, R. J. — a M
Orsini, Mrs. M. C. Ward — a M
Prasad, M. R. N. — b M
Ramsey, Miss E. M. — a M
Strauss, F. — b M
Wimsatt, W. A. — a M

b Early development, gastrulation, etc.

Islam, A. — a J
Lutz, H. — d L
Vakaet, L. C. — a L
Backhouse, K. M. — b M
Böving, B. G. — a, c M
Glenister, T. W. — c M

Early development

Balinsky, B. I. — a I
Davis, Miss R. J. — a I

Gastrulation and formation of germ layers

Balinsky, B. I. — a I
Davis, Miss R. J. — a I

Development of foetal membranes

Bautzmann, H. — b AM
Ince, Miss F. E. — b K
Alden, R. H. — a M
Mossman, H. W. — a M
Orsini, Mrs, M. C. Ward — a M
Prasad, M. R. N. — c M

c Neurulation, etc.

Neurulation (s.s.)
Development of neural crest

Raunich, L. — c J
Spratt, N. T., Jr. — d L
Flynn, T. Thomson — a M

First larval development

d Development of part of the organism

Head

Huber, W. — a M
Sinclair, J. G. — e M

Extremities

Cauna, N. — b V
François, Y. — a I
Slabý, O. — b AM
Camosso, Miss M. E. — a L
Saunders, J. W. — f, h L
Cauna, N. — b M
Lisowski, F. P. — a M
Olivier, G.H.G. and Pineau, H. — a M
Saunders, J. W. — f M
Zaaijer, Miss J. J. P. — c M

Tail

e Development of special organ-systems

Integument

General subjects

Weber, W. — a J
Wessells, N. K. — a L
Lyne, A. G. — a M

Exo-skeleton
Teeth

Leblond, C. P. — b V
Friant, Mrs. M. — b M
Kindahl, Miss M. E. — a M
Norberg, O. V. — a M

Hair, horns, nails

Friant, Mrs. M. — e V
Kathiresan, S. — a M
Lyne, A. G. — a, b M
Schinckel, P. G. — a, b M

Feathers

Friant, Mrs. M. — d L
Steiner, H. — a L

Sense organs

Cauna, N. — a M

Glands

Cohn, S. A. — a L
Gomot, L. and Lutz, H. — a L
Cohn, S. A. — a, b M
Frankenberger, Z. — a M
Lyne, A. G. — b M

Mammae
Pigment cells and patterns

Bagnara, J. T. — a J
Portmann, A. — c K
Nissen, Th. — a L
Reams, W. M. Jr. — a L
Saunders, J. W. — a L
Reams, W. M. Jr. — b M
Saunders, J. W. — a M

Nervous system

General subjects

Weber, A. — a
Baffoni, G. M. — a V
Harris, J. E. and Whiting, H. P. — a I
Blechschmidt, E. — a L
Dreyer, Miss M. V. — a L
Hamburger, V. — a L

Central nervous system

Horstmann, E. — a V
Olsson, R. — b V
Baffoni, G. M. — b J
Kollros, J. J. — e J
Jelínek, R. — a L
Brown, J. W. — a M

Brain

Ashley, G. T. — b V
Oksche, A. — a V
Rüdeberg, S. I. — a V
Fridberg, G. — a I
Nieuwenhuys, R. — a I
Olsson, R. — a, c I
Baumann, J. A. and Gallera, J. — b L
Harkmark, W. — a L
Portmann, A. — b L
Bijtel, Miss J. H. — e M
Brøndsted, H. V. — c M
Delmas, A. — a M
Fleischhauer, K. — a M
Friant, Mrs. M. — c M
Grignon, G. — b M
Harkmark, W. — b M
Horstmann, E. — b M
Humphrey, Miss T. — d M
Pilleri, Y. — a M
Portmann, A. — b M
Preto Parvis, Mrs. V. — c M
Sinclair, J. G. — a M
Windle, W. F. — b M

Spinal cord

Jit, I. — b M

Accessory organs

Mecklenburg, C. L. F. C. von — a I
Mellinger, J. — a I

Paraphysis

Parietal organ

Eakin, R. M. — c K

Pineal body

Oksche, A. — a V
Bose, A. — a K
Venzke, W. G. — a L
Ariëns Kappers, J. — a M

Hypophysis (see also under endocrine glands)

Baker, Miss B. I. — a I
Enemar, E. A. W. — a AM
Grignon, G. — a K
Bartelmez, G. W. — c M
Jansen, J. — a M

Ganglia

Nerves

Campenhout, E. van — a, b
Peters, A. — a J

Cephalic nerves

Campenhout, E. van — e K
Campenhout, E. van — e M
Eyries, Ch. — a M
Sinclair, J. G. — e M

Spinal nerves

Para- and sympathetic and intramural nervous system

Johnels, A. G. — a AN

Para- and sympathetic nervous system

Muratori, G. — b
Pera, L. — a K
Pera, L. — a L
Strudel, G. — a L
Jit, I. — c M

Intramural nervous system

Campenhout, E. van — d M

Meninges

Special sense organs

Nasal organ

Bijtel, Miss J. H. — c J
Bijtel, Miss J. H. — d M
Slabý, O. — c AM

Eye

Meyer, D. B. and O'Rahilly, R. — a L

Bartelmez, G. W. — b M
Sinclair, J. G. — d M

Eye (s.s.)

Steinitz, H. — c J
Pilleri, Y. — b M

Lens

Ear

Hagelin, L. O. — a I
Bijtel, Miss J. H. — b J
Eyries, Ch. — a M
Goedbloed, J. F. — a M
Sinclair, J. G. — e M

Lateral sense organs

Dragomirov, N. I. — a I
Pehrson, G. T. — a I

Skeleton

General subjects

Friant, Mrs. M. — e V
Leblond, C. P. — b V
Friant, Mrs. M. — a K
Friant, Mrs. M. — a L
Gray, D. J. — a L
Murray, P. D. F. — a L
Brookes, M. — a M
Crelin, E. S. — a M
Felts, W. J. L. — a, d, e M
Frankenberger, Z. — a M
Friant, Mrs. M. — a M
Gray, D. J. — a M
Jit, I. — d M
Robertson, G. G. — b M

Embryonic temporary endo-skeleton

Srinivasachar, H. R. — a I
Ganguly, D. N. and
Sarkar, D. N. — b L

Skull and visceral skeleton

Bertmar, G. — a I
Pehrson, G. T. — a I
Srinivasachar, H. R. — b I
Michael, M. I. and
Sedra, S. N. — a J
Slabý, O. — a AM
Hammond, W. S. and
Yntema, C. L. — a L
Kock, J. M. de — a L
Srinivasachar, H. R. — c L
Candiollo, L. — b M
Ford, E. H. R. — a M

Norberg, O. V. — a M

Truncal skeleton

François, Y. — a I
Alkemade, Miss E. C. M. — a L
Strudel, G. — b L
Brahma, S. K. and
Ganguly, D. N. — f M
Alkemade, Miss E. C. M. — a M
Crelin, E. S. — a M

Skeleton of extremities

Goff, R. A. — a L

Joints

Muscular system

General subjects

Wilde, C. E., Jr. — c J
Muir, A. R. — b M
Zaaijer, Miss J. J. P. — b M

Skeletal muscles (head, trunk and tail)
Visceral muscles (head and trunk)
Muscles of extremities

Alimentary tract

General subjects

Campenhout, E. van — b
Wilens, Miss S. W. — b J
Frankenberger, Z. — a M

Mouth- and pharyngeal cavities

Slípka, J. — a AM
Dreyer, Miss M. V. — a L
Harris, J. W. S. — a M
Kleiss, E. — a M
Massart, C. — a, c, d M
Walker, B. E. — a M

Intestinal tract

Butler, H. — b M
Dankmeijer, J. and
Miete, M. — e M
Gobetto, A. — a M
Jit, I. — e M
Koono, J. — a M

Proctodaeum

Pera, L. — b I
Pera, L. — b K
Pera, L. — b L

Salivary glands
Liver

Overton, Mrs. J. H. — a J
Overton, Mrs. J. H. — a L
Jit, I. — a M

Pancreas

Donaldson, J. C. — a M

Humphrey, Miss T. — b M

Respiratory organs

General subjects
External gills
Internal gills

Byczkowska (Smyk), Mrs. W. — a I

Lungs and larynx

Campenhout, E. van — a
Holst Christensen, P. J. — c M

Air-bladder

Heart, vascular system and blood

General subjects

Stéphan, Fr. — a L
Brookes, M. — a M

Heart

Dankmeijer, J. and Los, J. A. — a V
Gyévai, T. A. — a J
Baumann, J. A. and Gallera, J. — a L
Davies, F. and Francis, E. T. B. — a M
King, T. S. — a M
Latimer, H. B. — b M
Muir, A. R. — a M

Arterial system

Ingen, Miss H. C. van — b M

Arterial and venous system

Raunich, L. — a I
Enemar, E. A. W. — a AM
Lewis, O. J. — a M
Reynolds, S. R. M. — d M
Slijper, E. J. — a M

Venous system

Manner, H. W. — b J
Nakayama, T. — a M
Reis, R. H. — c M

Capillary system

Horstmann, E. — b M

Blood

Raunich, L. — a I
Chishima, K. — b, d J
Chishima, K. — d L
Lemež, L. — a L
Venzke, W. G. — b L
Chishima, K. — d M
Harris, P. F. — a M
Jones, O. P. — a, b M
Muir, A. R. — b M

Popp, R. A. — a M

Coelomic cavities and endothelia, lymphatic system and connective tissue

Coelomic cavities

Quénu, L. — a M
Quereux, P. — a M

Endothelia
Lymphatic system

Grodziński, Z. — b I.
Gyllensten, L. J. W. — a M
Koono, J. — a M

Connective tissue

Preto Parvis, Mrs. V. — b L
Koono, J. — b M
Reams, W. M. Jr. — b M
Rengel, S., L. — a M

Urogenital system and sexual differentiation

General subjects

Backhouse, K. M. — a M

Kidneys

Fox, H. — a I
Cambar, R. — a J
Fox, H. — a I
Boyer, C. C. — a M
Torrey, Th. W. — b M

Nephric ducts and bladder
Gonads

Witschi, E. — f V
Follenius, E. and Vivien, J. H. — a I
Mohsen, Th., Vivien, J. H. and Thiebold, J. J. — a I
Aoto, T. — b J
Ranzoli, F. — c J
Matějka, M. — a AM
Stéfan, Miss Y. and Vivien, J. H. — a K
Marin, G. — a L
Asayama, S. — b M
Backhouse, K. M. — a M
Jirásek, J. — a M
Lindh, J. — a M
Torrey, Th. W. — a M
Vacek, Z. — a M

Genital tract

Anteunis, Miss A. H. J. — a I

Mohsen, Th., Vivien, J. H. and Thiebold, J. J. — a I
Matějka, M. — a AM
Raynaud, A. — a K
Stéfan, Miss Y. and Vivien, J. H. — a K
Corner, G. W. — a M
Dankmeijer, J. — c M
Forsberg, J. G. — a M
Gitlin, G. — a M
Massart, C. — b M
Mossman, H. W. — a M
Ross, Miss J. R. W. — a M
Torrey, Th. W. — a M

Accessory glands

Matějka, M. — a AM
Bengmark, S. — a M

Sexual differentiation

Follenius, E. — b I
Aoto, T. — b J
Witschi, E. — c J
Belluomini, H., Hoge, A. and Schreiber, G. — a K
Lutz, H. and Lutz (Ostertag), Mrs. Y. — h L
Marin, G. — a L
Witschi, E. — c L
Lindahl, P. E. and Sundell (Thorsell), Mrs. G. — b M
Witschi, E. — c M

Endocrine glands

General subjects

Hay, Miss D., Vivien, J. H. and Schott, Miss J. — c I
Hay, Miss D., Vivien, J. H. and Schott, Miss J. — c J
Dimond, Sister M. T. — a K
Moog, Miss F. — b L
Hinrichsen, K. — c M
Moog, Miss F. — b M

Hypophysis (see also under nervous system)

Follenius, E. — b I
Meurling, P. B. — a I
Dimond, Sister M. T. — a K
Grignon, G. — a K
Jansen, J. — a M

Thymus

Thyroid gland

Leblond, C. P. — a V
Slípka, J. — b AM
Young, B. A. — a M

Parathyroid glands

Boschwitz, Miss B. D. — a J

Gonads

Witschi, E. — f V

Adrenals

Heckerman, R. O. — a L
Perrenot, Miss M. — a L
Heckerman, R. O. — a M

Pancreas

f Histo- and cytogenesis

Friant, Mrs. M. — e V
Schreiber, G. — a J
Wallace, H. — a J
Bellairs (Morgan), Mrs. M. R. — a L
Dossel, W. E. — c L
Preto Parvis, Mrs. V. — b L
Schreiber G. — a M

8 Growth and differentiation (Invertebrates and Vertebrates)

a Growth

Mitchison, J. M. — a P
Swann, M. M. — b P
Tuft, P. H. — a D
Tuft, P. H. — a I
Tisna-Amidjaja, D. A. — a J
Tuft, P. H. — a J
Weber, W. — a J
Felts, W. J. L. — a M
Ford, E. H. R. — a M
Frazer, J. F. D. — b M
Olivier, G. H. G. and Pineau, H. — b M
Robertson, G. G. — b M
Schinckel, P. G. — b M

a/b Growth and differentiation

Baffoni, G. M. — a V

b Differentiation

Kemp, N. E. — e EV+V
Gloor, H. J. — a D
Karasaki, S. — a J
Matsumoto, A. — a J
Clark, H. — c L
Muir, A. R. — b M

II. EXPERIMENTAL DEVELOPMENTAL MORPHOLOGY

SUBDIVISION

1 Theoretical problems and general questions

2 Methods and techniques

3 General subjects (asexual development, reproduction, etc.)

4 Initial development

- a General subjects
- b Primordial germ cells
- c Gameto-, ovo- and spermatogenesis
- d Maturation
- e Ovulation and oviposition
- f Activation and fertilization
- g Parthenogenesis

5 Cleavage and mitosis

- a Cleavage
- b Mitosis

6 Further development of Invertebrates

- a General subjects (including complete development)
- b „Primitiventwicklung"
- c Induction and determination
- d Development of part of the organism
- e Development of special organ systems
  (Cf. general subdivision p. 173—175)
- f Histo- and cytogenesis

7 Further development of Vertebrates

- a General investigations
  - 1 General subjects
  - 2 Complete development
  - 3 Partial development
  - 4 Implantation and placentation
- b „Primitiventwicklung"
  - 1 Early development
  - 2 Gastrulation and formation of germ layers
  - 3 Neurulation
  - 4 Formation of neural crest
  - 5 First larval development
- c Induction and determination
  - 1 Induction
  - 2 Determination
  - 3 Regulation and organization
- d Development of part of the organism
  - 1 Head
  - 2 Extremities
  - 3 Tail
- e Development of special organ systems
  (Cf. general subdivision p. 173—175)
- f Histo- and cytogenesis

8 Growth and differentiation (Invertebrates and Vertebrates)
a Growth
a/b Growth and differentiation
b Differentiation

CHARACTER OF INVESTIGATION

(4) Physical treatment
(5) Chemical treatment
(6) Influence of hormones and vitamins

1 Theoretical problems and general questions

Cairns, J. M. — c

2 Methods and techniques

Castiglioni, Miss M. C. — d D
Sakai, H. — a G
Shah, R. V. — a V
Teramura, Miss Y. — a I
Briggs, R. W. — b J
Curtis, A. S. G. — b J
Curtis, A. S. G. — b L
Hašek, M. — a L
Muratori, G. — a L
Hicks, S. P. — a (4)M

3 General subjects

(asexual development, reproduction, etc.)

Sanyal, S. — a B
Kanatani, H. — c C
Gilbert, P. W. — a I
Gates, A. H. — a M

4 Initial development

a General subjects

Borstel, R. C. von — b (4)D
Harvey, Mrs. E. B. — a, f (4)G
Sakai, H. — a G
Lopashov, G. V. — c, d I
Ruch, J. V. — a I
Teramura, Miss Y. — a I
Zahnd, J. P. — c I
Blackler, A. W. C. — b J
Lopashov, G. V. — c, d J
Zahnd, J. P. — c K
Beatty, R. A. — a M
Fessenden (Cooley), Mrs. L. M. — a M

b Primordial germ cells

Vannini, E. — c C
Geyer (Duszyńska), Mrs. I. — c D
Follenius, E. and Vivien, J. H. — a I
Aubry, Miss R. — a J
Amanuma, A. — a J
Bounoure, L. — a J
Kotani, M. — a J
Mintz, Miss B. — a L
Muratori, G. — a L
Simon, Mrs. D. — a L
Mintz, Miss B. — a M

c Gameto-, ovo- and spermatogenesis

Vannini, E. — c C
Tahmisian, T. N—. c (4)D
Clavert, J. M. J. — a (6)I
Kanoh, Y. — a I
Kanoh, Y. — a J
Clavert, J. M. J. — a (6)K
Clavert, J. M. J. — a (6)L
Austin, C. R. — a M
Bishop, M. W. H. — a M
Hamilton, W. J. and Harrison, R. J. — a M
Harrison, R. G. — a M
MacMillan, E. W. — a, c, d (6)M

d Maturation

Dan, K. — b G

e Ovulation and oviposition

Runner, M. N. — a (6)M

f Activation and fertilization

Ginsburg, Mrs. A. S. — a I
Kanoh, Y. — a I
Kille, R. A. — a I
Kanoh, Y. — a J
Austin, C. R. — a M
Bishop, M. W. H. — a M
Braden, A. W. H. — a M

Cheney, R. H. — b (5)M
Fessenden (Cooley), Mrs. L. M. — b M
Runner, M. N. — a (6)M

g Parthenogenesis

Astaurov, B. L. — a D
Harvey, Mrs. E. B. — a G

5 Cleavage and mitosis

a Cleavage

Dan, K. — a G
Marsland, D. A. — a (4)G
Rieck, A. F. — d (4)G
Lopashov, G. V. — c, d I
Jaffee, O. C. — a (4)J
Lopashov, G. V. — c, d J
Fessenden (Cooley), Mrs, L. M. — a M

b Mitosis

Rasmussen, L. and Zeuthen, E. — a P
Costello, D. P. and Henley, Miss C. — b (5)J
Källén, A. J. B. — a J
Corliss, C. E. — c L
Källén, A. J. B. — c L
Hintzsche, E. — b (5)M

6 Further development of Invertebrates

a General subjects (including complete development)

Perry, Miss M. M. and Waddington, C. H. — a (5)EV
Hanson, E. D. — c (5)P
Kerr, N. S. — a P
Schwartz, V. — b P
Shaffer, B. M. — a P
Tartar, V. — b P
Brøndsted, H. V. — b A
Chishima, K. — c A
Crowell, P. S. — a B
Hale, L. J. — a B
Hauenschild, C. — b B
Lytle, C. F. — a B
Sembrat, K. — a B
Benazzi, M. — c (4)C
Costello, D. P. and Henley, Miss C. — a C
Monné, L. — a C

Sugino, H. — a C
Banerjee, S. — a D
Bednjakova, Mrs. T. A. — a (4)D
Bednjakova, Mrs. T. A., Ginzburg, G. I. and Ramenskaia, Mrs. G. P. — c D
Bodenstein, D. — c D
Bookhout, C. G. — b, c (4/5)D
Goto, T. — b (5)D
Hadorn, E. — d D
Hama, T. — b (5)D
Jura, Cz. — a D
Krause, G. — a D
Mori, H. — a (5)D
Nüesch, H. — a D
Oelhafen, F. H. — a D
Rappaport, R. Jr. — b D
Takami, T. — b D
Verejskaja, Miss V. N. — a (4)D
Kawakami, Mrs. K. I. — d E
Morrill, J. B. — a (5)E
Schneider, D. — d F
Cheney, R. H. — a (5)G
Gustafson, T. and Hörstadius, S. — c (5)G
Harvey, Mrs. E. B. — b, g (5)G
Brewin, B. I. — a H

b „Primitiventwicklung"

Clement, A. C. — a E

c Induction and determination

Mookerjee, S., Sanyal, S., Nagarajan, S. N. and Sinha, A. K. — a B
Holm, K. Å. — a D
Krause, G. — b D
Sander, K. — a D
Ursprung, H. — a D
Clement, A. C. — a E
Hess, O. — a E
Hörstadius, S. — a G
Lallier, R. A. — b G
Farinella (Ferruzza), Mrs. N. — b H
Ortolani, Miss G. — a H

d Development of part of the organism

Haget, A. — a D
Löbbecke, E. A. — b D
Pohley, H. J. — a D

Schoeller, Miss J. — a, b D
Wolsky, A. — c D

e Development of special organ systems

Skin

Kühn, A. — a D
Schwartz, V. — a D
Wolsky, A. — c D
Cather, J. N. —a E
Schneider, D. — b, e F

Nervous system

Olsson, R. — b H

Special sense organs

Wolsky, A. — c D

Skeleton

Okazaki, Miss K. — a G

Muscular system

Alimentary system

Respiratory organs

Heart, vascular system and blood

Coelomic cavities and endothelia, lymphatic system and connective tissue

Urogenital system and sexual differentiation

Borstel, R. C. von — a D
Giles, E. T. — a D
Katakura, Y. — a D
Miya, K. — a D
Aubry, Miss R. — b E

Endocrine glands

f Histo- and cytogenesis

Alamelu, Mrs. M. G., Mookerjee, S., Waidyasekara, L., Mukerji, Miss D. and Dutta, J. — a P
Mukerji, Miss D. — a (4)P
Waidyasekara, L. — a (5)P
Astaurov, B. L. — d (4)D
Castiglioni, Miss M. C. — d D
Geigy, R. — d D
Jones, B. M. — b D
Shaffer, B. M. — a P

7 Further development of Vertebrates

a General investigations

General subjects

Kuhn, O. — c (5)
Nicholas, J. S. — c
Kawakami, I. — b (5)V
Perry, Miss M. M. and Waddington, C. H. — a (5)V
Clavert, J. M. J. — b I
François, Y. — b (5)I
Hama, T. — b (5)I
Hamdorf, K. — a (4/5)I
Hisaoka, K. K. — a (2b/5)I
Koops, H. — a (4)I
Lillelund, K. — a (4/5)I
Lutz, H. and Lutz (Ostertag), Mrs. Y. — c I
Oppenheimer, Miss J. M. — a I
Pflugfelder, O. — b I
Trinkaus, J. P. — b I
Welander, A. D. — a (4)I
Anton, H. J. — b J
Billett, F. S. — a (5)J
Bondi, C. — b J
Cate, G. ten — c (4)J
Costello, D. P. and Henley, Miss C. — a J
Curtis, A. S. G. — b J
Gallien, L. — c (5)J
Goto, T. — b (5)J
Guardabassi, Miss A. — b (4)J
Hama, T. — b (5)J
Hamilton, Miss L. — c (5)J
Kemp, N. E. — b J
Mangold, O. — a (4/5)J
Nakamura, O. — d J
Newth, D. R. — b (5)J
Perri, T. — c (4)J
Peters, Th. — a (4)J
Pflugfelder, O. — b J
Romanovský, A. — a J
Rossi, A. — a J
Singer, M. — a (5)J
Steinberg, M. S. — b J
Stultz, W. A. — a J
Takaya, H. — b J
Benoit, J. — a (5)AM
Clavert, J. M. J. — b K
Dufaure, J. P. — a K
Pflugfelder, O. — b K
Raynaud, A. — c (4)K
Abercrombie, M. — a L

Bagiński, S. — b, c (4/5)L
Bermann, F. — a L
Bose, A. — b (4)L
Clavert, J. M. J. — b L
Curtis, A. S. G. — b L
Harrison, J. R. — b L
Hašek, M. — a L
Kawakami, Mrs. K. I. — b (5)L
Koecke, H. U. — b L
Lutz, H. — b L
Lutz, H. and Lutz (Ostertag), Mrs. Y. — e, f L
May, R. M. — b L
McCafferty, R. E. — a (4)L
Menkes, B. — f L
Moog, Miss F. — b (6)L
Moscona, A. A. — c L
Nicholas, J. S. — h L
Pflugfelder, O. — b L
Trinkaus, J. P. — b L
Watterson, R. L. — c (6)L
Wolff, Et. — a, f L
Auerbach, R. — a M
Austin, C. R. — a M
Beatty, R. A. — a M
Bermann, F. — a M
Bishop, M. W. H. — a M
Cheney, R. H. — b (5)M
Dagg, C. P. — a M
Degenhardt, Mrs. K. H. — b M
Häggqvist, G. — a (5)M
Hicks, S. P. — a (4)M
Lisowski, F. P. — a M
May, R. M. — a M
McCafferty, R. E. — a (4)M
McLaren, Miss A. — a, d M
Mercier (Parot), Mrs. L. — b (6)M
Moog, Miss F. — b (6)M
Moscona, A. A. — c M
Nicholas, J. S. — f, g, h (4)M
Sinclair, J. G. — c (5)M
Swartz, G. E. — a M
Tuchman-Duplessis, H. — c (6)M
Walker, B. E. — c M
Wolff, Et. — f M
Wrba, H. — b M

Complete development

Partial development

Battle, Miss H. I. — a, b (5)I
Devillers, Ch. — b I
Green, Mrs. E. U. — a (5)J
Takaya, H. — c (4)J
Watanabé, T. — a (4)J
Wilde, C. E., Jr. — b J
Zwilling, E. — a L

Implantation and placentation

Buchanan, G. D. — a M
Orsini, Mrs. M. C. Ward — b M
Runner, M. N. — a (6)M
Wrba, H. — b M

b „Primitiventwicklung"

Shah, R. V. — a V
Trinkaus, J. P. — c I
Nakamura, O. — a J
Wilens, Miss S. W. — a J
Boersma, W. — a L
Nakamura, I. — a L
New, D. A. T. — a L
Overton, Mrs. J. H. — b (5)L
Pertusa, J. — a L
Schlesinger, A. B. — b L
Trinkaus, J. P. — c L
Vakaet, L. C. — a L

Early development

Gallien, L. — e (4)J
Løvtrup, S. — a J

Gastrulation and formation of germ layers

Castigli (Pitotti), Mrs. M. — a I
Løvtrup, S. — a J

Neurulation

Eakin, R. M. — a J

Formation of neural crest

Mina, E. Y. — a J
Wilde, C. E., Jr. — a J
Koecke, H. U. — c, e L

First larval development

Finnegan, C. V. — a J
Kato, K. — a J
Masui, Y. — b J

c Induction, determination, etc.

Holtfreter, J. K. F. — b J
Brahma, S. K. — b J
Moscona, A. A. — b L
Moscona, A. A. — b M

Induction

Sasaki, N. — a V
Ignatjeva, Mrs. G. M. — b I
Beaupain, R. R. — a J
Brahma, S. K. — e J

Eakin, R. M. — b J
Engländer, H. — a J
Eyal (Giladi), Mrs. H. — a J
Finnegan, C. V. — a J
Gallera, J. — d J
Grinten. S. J. v.d. — a J
Hama, T. — a J
Holtfreter, J. K. F. — a J
Jacobson, A. G. — a, b J
Johnen, Miss A. G. — a, b J
Kuusi, Miss T. K. — c (5)J
Lallier, R. A. — a J
Leussink, J. A. — a J
Masui, Y. — a (5)J
Mifune, S. — a J
Moore, J. A. — c J
Nieuwkoop, P. D. — a, b J
Reyer, R. W. — b J
Reyss-Brion (Ducreau), Mrs. M. — b (4)J
Ruben, L. N. — a 2 J
Sala, M., S. J. — a J
Sasaki, N. — b J
Saxén, L. O., Toivonen, S. I. and Vainio, E. T. — b J
Sládeček, F. — a J
Spofford, W. R. — a J
Toivonen, S. I. — a J
Woellwarth, C. v. — a, b, c J
Bagnara, J. T. — b L
Boersma, W. — a L
Gallera, J. — d L
Grabowski, C. T. —a, b, c L
Hara, K. — a L
Schowing, J. — a L
Spratt, N. T., Jr. — d L
Strudel, G. — c L
Veneziano, P. P. — a L
Woerdeman, M. W. — b L
Mifune, S. — a M
Nicholas, J. S. — b M
Woerdeman, M. W. — b M

Determination

Denis, H. A. — a J
Eakin, R. M. — a J
Fischiarolo, G. — a J
Hörstadius, S. — b J
Mangold, O. — c J
Raunich, L. — b J
Spofford, W. R. — a J

Stultz, W. A. — d J
Koecke, H. U. — e L
Whittaker, J. R. — a (5)L
Woerdeman, M. W. — b L
Woerdeman, M. W. — b M

Regulation and organization

Hay, Miss D. and Vivien, J. H. — a I
Bieliavsky, N. — a J
Boterenbrood, Miss E. C. — a J
Cury, G. — a J
Holtfreter, J. K. F. — c J
Mina, E. Y. — b J
Sembrat, K. — d J
Testa, I. — a J
Amprino, R. M. — b L
Grabowski, C. T. —a, b, c L
Hampé, A. — a, b, c L
Kawakami, I. — a M

d Development of part of the organism

Head

Mangold, O. — b J
Woellwarth, C. v. — c J
Grabowski, C. T. — a, b, c L
Schowing, J. — a L
Huber, W. — a M

Extremities

François, Y. — a I
Gabie (Gubbay), Mrs. V. — b I
Harrison, R. G. — a J
O'Brien, J. P. — a J
Perri, T. — a, b J
Ruben, L. N. — a 2 J
Stinson, B. D. — c (4)J
Stultz, W. A. — b, d J
Takahashi, H. — b (6)J
Wilde, C. E., Jr. — a J
Amprino, R. M. — a, b, c L
Barasa, A. — a L
Cairns, J. M. — a L
Hampé, A. — a L
Saunders, J. W. — c, e, h L
Zwilling, E. — c L
Cairns, J. M. — a M

Tail

Farinella (Ferruzza), Mrs. N. — a J
Holtfreter, J. K. F. — a J

Nakamura, O. — b J
O'Brien, J. P. — a J

e Development of special organ systems

Integument

General subjects

Wolsky, A. — c J
Rawles, Miss M. E. — a L
Sengel, Ph. — b, c (5)L
Wessells, N. K. — a L
Lyne, A. G. — a M

Exo-skeleton

Teeth

Brouwer, P. J. and Dankmeijer, J. — a M
Cohn, S. A. — c M
Niizima, M. — b M

Hair, horns, nails

Chase, H. B. — b, c (4)M
Goss, R. J. — e M
Lyne, A. G. — a M
Short, B. F. — b M

Feathers

Cairns, J. M. — b L
Kuhn, O. — b L
Saunders, J. W. — d L
Sengel, Ph. — b, c (5)L

Sense organs

Glands

Gomot, L. and Lutz, H. — a L

Mammae

Pigment cells and patterns

Goodrich, H. B. — a I
Hama, T. — c I
Hishida, T. — c I
Mori, Y. — a, b I
Andres, G. — b J
Bagnara, J. T. — a (6)J
Hama, T. — c J
Nowakówna, Miss J. — b (6)J
Hamilton, H. L. — b L
Koecke, H. U. — c, d L
Menkes, B. — a L
Sengel, Ph. — a L
Willier, B. H. — b L
Chase, H. B. — b M
Markert, C. L. — b M
Reams, W. M. Jr. — b M

Nervous system

General subjects

Hughes, A. F. W. — a V
Stefanelli, A. — a V
Gallera, J. — c J
Perri, T. — b J
Spofford, W. R. — b J
Gallera, J. — c L
Godina, G. — a, b L
Stefanelli, A. — g L
Thillard, Miss M. J. — a L
Veneziano, P. P. — d L
Wenger, B. S. — a L
Whittaker, J. R. — a (5)L
Eayrs, J. T. — a (6)M
LaVelle, A. — b M

Central nervous system

Bergquist, H. — a V
Olsson, R. — b V
Gallera, J. — d J
Jacobson, D. C.-O. — a J
Källén, A. J. B. — a J
Kollros, J. J. — a, d J
Leussink, J. A. — a J
Takaya, H. — a J
Woellwarth, C. v. — a J
Corliss, C. E. — c L
Gallera, J. — d L
Grabowski, C. T. — a, b, c L
Hara, K. — a L
Jelínek, R. — a L
Källen, A. J. B. — c L
McCallion, D. J. — a L
Glass, A. — a (4)M
Hogue, Miss M. J. — a M

Brain

Boterenbrood, Miss E. C. — a J
Denis, H. A. — b J
Filogamo, G. — c L
Grignon, G. — b M

Spinal cord

Stultz, W. A. — c J
Steding, G. — a L

Accessory organs

Paraphysis

Parietal organ

Pineal body

Bose, A. — a K
Moszkowska, Mrs. A. — a L
Thillard, Miss M. J. — b L

Venzke, W. G. — c M

Hypophysis (see also under endocrine glands)

Eakin, R. M. — a J
Eyal (Giladi), Mrs. H. — a J
Grignon, G. — a K

Ganglia

Nerves

Sala, M., S. J. — b J
LaVelle, A. — a (5) M
Zelena, Mrs. J. — a, b M

Para- and sympathetic and intramural nervous system

Vacek, Z. — b L

Meninges

Special sense organs

Nasal organ

Eye

Gabie (Gubbay), Mrs. V. — a J
Holtfreter, J. K. F. — c (4) J
Kollros, J. J. — g J
Mina, E. Y. — b J
Wolsky, A. — c J
Amprino, R. M. — d L
Harrison, J. R. — a L
Rugh, R. — c M
Sinclair, J. G. — d M

Eye (s.s.)

Sembrat, K. — d J
Stone, L. S. — d J
Stroëva, Miss O. G. — c (5) J
Stroëva, Miss O. G. — b M

Lens

Sasaki, N. — a V
Becker, U. — b J
Brahma, S. K. — b J
Eakin, R. M. — a J
Jacobson, A. G. — a J
Reyer, R. W. — b J
McKeehan, M. S. — a L

Ear

Harrison, R. G. — b J
Yntema, C. L. — a J
Schlesinger, A. B. — c M

Lateral sense organs

Skeleton

General subjects

Kieny, Mrs. M. A. — a L
Murray, P. D. F. — a L

Strudel, G. — c L
Veneziano, P. P. — a L
Zaaijer, Miss J. J. P. — a L
Zahnd, J. P. — a L
Felts, W. J. L. — b M
Zaaijer, Miss J. J. P. — a M

Embryonic temporary endo-skeleton

Grabowski, C. T. — c L

Skull and visceral skeleton

Srinivasachar, H. R. — b I
Hammond, W. S. and Yntema, C. L. — a L
Schowing, J. — a L
Darlington, D. — a M
Ford, E. H. R. — b (6) M

Truncal skeleton

François, Y. — a I
Strudel, G. — c L
Grüneberg, H. — a M
Runner, M. N. — b M

Skeleton of extremities

Grüneberg, H. — a M

Joints

Muscular system

General subjects

Zelena, Mrs. J. — a, b M

Skeletal muscles (head, trunk and tail)

Darlington, D. — a M

Visceral muscles (head and trunk)

Hammond, W. S. — b L

Muscles of extremities

Sullivan, G. E. — a, b L

Alimentary tract

General subjects

Cambar, R. — d J
Dechambre, Miss C. — a J
Nakamura, O. — c J

Mouth- and pharyngeal cavities

Fagone, Miss A. — a J
Harris, J. W. S. — a M

Intestinal tract

Bondi, C. — c J
Coulombre, A. J. and Coulombre, J. L. — b, d, e L
Weniger, J. P. — a L
Weniger, J. P. — a M

Proctodaeum

Salivary glands

Brice, M. C. — a M

Liver

Croisille, Y. — a L
Marin (Lewin), Mrs. L. — a L
Niizima, M. — c L
Watterson, R. L. — a (5)L
Niizima, M. — c M

Pancreas

Frye, B. E. — b J
Veneziano, P. P. — e (6)J

Respiratory organs

General subjects

External gills

Wilde, C. E., Jr. — a J

Internal gills

Lungs and larynx

Air-bladder

Heart, vascular system and blood

General subjects

Heart

Jacobson, A. G. — b J
Jaffee, O. C. — b J
Zwirner, R. — a J
DeHaan, R. L. — a L
Rychter, Z. — a L

Arterial and venous system

Rychter, Z. — a L
Stéphan, Fr. — b L

Capillary system

Blood

Häggqvist, G. — b V
Cury, G., Dollander, A. and Gassiole, Mrs. D. — c L
Lemež, L. — b L
Jones, O. P. — b M

Coelomic cavities and endothelia, lymphatic system and connective tissue

Coelomic cavities and endothelia

Lympathic system

Gyllensten, L. J. W. — a (6)M

Connective tissue

Edds, M. V., Jr. — a J
Reams, W. M. Jr. — b M

Urogenital system and sexual differentiation

General subjects

Cambar, R. — e J
Wolff, Mrs. Em. and Wolff, Et. — a AM
Calame, Miss S. M. — a L
Groenendijk (Huijbers), Mrs. M. M. — a L
Bengmark, S. and Forsberg, J. G. — b (6)M
Forsberg, J. G. — b (6)M

Kidneys

Fox, H. — a I
Cambar, R. — a, b J
Fox, H. — a, b J
Shin-Iké, T. — a J

Nephric ducts and bladder

Bijtel, Miss J. H. — a J

Gonads

Salzgeber, Miss B. — b (5)
Witschi, E. — f V
D'Ancona, U. — a I
Follenius, E. and Vivien, J. H. — a I
Amanuma, A. — b (6)J
Aoto, T. — b J
Bounoure, L. — a J
Foote, Ch. L. and Foote, Mrs. F. M. — b J
Gipouloux, J. D. — a J
Sabbadin, A. — a (6)J
Vannini, E. — b J
Yoshikura, M. — b, c (4/6)J
Stéfan, Miss Y. and Vivien, J. H. — a K
Limborgh, J. van — a L
Marin, G. — a L
Moszkowska, Mrs. A. — a L
Veneziano, P. P. — f (5)L
Weniger, J. P. — a L
Wolff, Et. — b (6)L
Belka, A. — b M
Chachulska, W. — b M
Furusawa, M. — a M
Lindh, J. — a M
Rugh, R. — b (4)M
Torrey, Th. W. — a M
Weniger, J. P. — a M

Genital tract
Ruch, J. V. — b V
Gipouloux, J. D. — a J
Stéfan, Miss Y. and Vivien, J. H. — a K
Lutz (Ostertag), Mrs. Y. — a L
Wolff, Et. — b (6)L
Clegg, E. J. — a M
Glenister, T. W. — a (6)M
Torrey, Th. W. — a M
Accessory glands
Gipouloux, J. D. — a J
Clegg, E. J. — a M
Sexual differentiation
Salzgeber, Miss B. — a (4/5)
Wróblewski, R. — c
Harvey, Mrs. E. B. — d (4)G
Querner, H. — b I
Yamamoto, T. — b I
Aoto, T. — b J
Foote, Ch. L. and Foote, Mrs. F. M. — a J
Gallien, L. — a J
Hanaoka, K. I. — a J
Michalowski, J. — a J
Miyamori (Yamamoto), Mrs. H. — a (6)J
Takahashi, H. — a (6)J
Witschi, E. — c, d (6)J
Raynaud, A. — b (6)K
Limborgh, J. van — b L
Lutz (Ostertag), Mrs. Y. and Wolff, Et. — b (6)L
Marin, G. — a L
Preda, V. — c (6)L
Stoll, R. — b L
Wolff, Et. — b (6)L
Asayama, S. — a (6)M
Jost, A. D. — b M
Witschi, E. — c, d (6)M

Endocrine glands

General subjects
Ford, P. — a I
Iwasawa, H. — a I
Guardabassi, Miss A. and Mazzi, V. — a J
Iwasawa, H. — a I
Watterson, R. L. — d (6)L

Hypophysis (see also under nervous system)
Guardabassi, Miss A. — c J
Guardabassi, Miss A. and Mazzi, V. — a J
Dimond, Sister M. T. — a (6)K
Grignon, G. — a K
Cury, G. and Grignon, G. — b L
Moszkowska, Mrs A. — a L
Lydecken, K. — a M

Thymus

Thyroid gland
Carpenter, Miss E. — a, c (6)V
Lieber, Miss A. — a I
Guardabassi, Miss A. — c J
Guardabassi, Miss A. and Mazzi, V. — a J
Pflugfelder, O. — e (5)J
Dossel, W. E. — a L
Hilfer, S. R. — b L
Pflugfelder, O. — e (5)L
Stoll, R. — a L
Tixier (Vidal), Mrs. A. — a, e (4)L
Brouwer, P. J. and Dankmeijer, J. — a M
Lydecken, K. — a M

Parathyroid glands
Boschwitz, Miss B. D. — a J
Guardabassi, Miss A. — c (5)J

Gonads
Witschi, E. — f V

Adrenals
Willier, B. H. — a L
Witschi, E. — c L

Pancreas
Dieterlen (Lièvre), Mrs. F. — a, b (6)L

f Histo- and cytogenesis
Borghese, E. — a
Clark, H. — b
Monesi, V. — a
Stefanelli, A. — a V
Lopashov, G. V. — d I
Briggs, R. W. — b J
Briggs, R. W. and King, T. J. — a J
Brouant, J. F. — a (5)J
Lopashov, G. V. — a, b, d J

Nedvídek, J., Sládeček, F. and Romanovský, A. — b J
Wilde, C. E., Jr. — e J
Levi, G. L. — b AM
Wolff, Mrs. Em. and Wolff, Et. — a AM
Abercrombie, M. — b L
Bermann, F. — a L
Coulombre, A. J. and Coulombre, J. L. — e L
Ebert, J. D. — d L
May, R. M. — b L
Moscona, A. A. — a, b L
Moszkowska, Mrs. A. — a L
Oldfield, Miss F. E. — a L
Weston, J. A. — a L
Wilde, C. E., Jr. — f L
Zwilling, E. — b L
Auerbach, R. — a M
Bermann, F. — a M
Hintzsche, E. — c (4)M
Moscona, A. A. — a, b M
Mulnard, J. O. — c M
Wilde, C. E., Jr. — f M

8 Growth and differentiation

(Invertebrates and Vertebrates)

a Growth

Schreiber, B. — a (5)
Rasmussen, L. and Zeuthen, E. — a P
Crowell, P. S. — a B
Lytle, C. F. — a B
Frye, B. E. — b (6)J
Green, Mrs. E. U. — a (5)J
Heath, H. D. — a J
Moment, G. B. — b J
Levi, G. L. — a AM
Cairns, J. M. — a L
Chaytor, D. E. B. — a L
Doskočil, M. — a L
Godina, G. — b L
Nurjehan, Miss B. — a L
Stefanelli, A. — f L
Thillard, Miss M. J. — a L
Cairns, J. M. — a M
Ford, E. H. R. — b (6)M
Harrison, G. A. — a (4)M
Hintzsche, E. — b (5)M

a/b Growth and differentiation

Borghese, E. — a
Monesi, V. — a
Geigy, R. — d D
Jones, B. M. — b D
Lopashov, G. V. — d I
Lopashov, G. V. — a, b, d J
Foote, Ch. L. and Foote, Mrs. F. M. — b J
Stone, L. S. — d J
Wilde, C. E., Jr. — d (2a)J
Adhikari, S. — a (5)L
Dameron, Miss F. — a (4)L
Ebert, J. D. — d L
May, R. M. — b L
McKeehan, M. S. — a L
Moszkowska, Mrs. A. — a L
Simon, Mrs. D. — a L
Mulnard, J. O. — c M

b Differentiation

Grant, Ph. — b C
Tahmisian, T. N. — a D
Oppenheimer, Miss J. M. — a I
Trinkaus, J. P. — a I
Barth, L. G. and Barth, Mrs. L. J. — a J
Bondi, C. — b J
Briggs, R. W. — b J
Briggs, R. W. and King, T. J. — a J
Brouant, J. F. — a (5)J
Kato, K. — a J
King, Th. J. and McKinnell, R. G. — b J
King, Th. J. and Subtelny, S. — a J
Masui, Y. — b J
Nakamura, O. — d J
Nedvídek, J., Sládeček, F. and Romanovský, A. — b J
Wilde, C. E., Jr. — b, e J
Wolff, Mrs. Em. and Wolff, Et. — a AM
Adhikari, S., Mookerjee, S., Nurjehan, Miss B. and Ghosal, S. — b (5)L
Clayton (Freedman), Mrs R. M. and Okada, T. S. — c L

II. 8b

Hilfer, S. R. — b	L	Brice, M. C. — a	M
McCallion, D. J. — b	(5)L	Markert, C. L. — b	M
Trinkaus, J. P. — a	L	Nicholas, J. S. — j	M
Wessells, N. K. — a	L	Schlesinger, A. B. — c	M
Weston, J. A. — a	L	Stroëva, Miss O. G. — b	M
Wilde, C. E., Jr. — f	L	Wilde, C. E., Jr — f	M
Zwilling, E. — a	L	Wrba, H. — b	M

III. PHYSIOLOGY OF DEVELOPMENT

SUBDIVISION

1 Theoretical problems and general questions
2 Methods and techniques
3 General subjects (asexual development, reproduction, etc.)
4 Initial development
- a General subjects
- b Primordial germ cells
- c Gameto-, ovo- and spermatogenesis
- d Maturation
- e Ovulation and oviposition
- f Activation and fertilization
- g Parthenogenesis

5 Cleavage and mitosis
- a Cleavage
- b Mitosis

6 Further development of Invertebrates
- a General subjects (including complete development)
- b „Primitiventwicklung"
- c Induction and determination
- d Development of part of the organism
- e Development of special organ systems
  (Cf. general subdivision p. 173—175)
- f Histo- and cytogenesis

7 Further development of Vertebrates
- a General investigations
  - 1 General subjects
  - 2 Complete development
  - 3 Partial development
  - 4 Implantation and placentation
  - 5 Development of behaviour
- b „Primitiventwicklung"
  - 1 Early development
  - 2 Gastrulation
  - 2/3 Gastrulation and neurulation
  - 3 Neurulation
  - 4 Development of neural crest
- c Induction, determination, etc.
  - 1 Induction
  - 2 Determination
  - 3 Regulation and organization

d Development of part of the organism
1 Head
2 Extremities
3 Tail
e Development of special organ systems
(Cf. general subdivision p. 173—175)
f Histo- and cytogenesis
8 Growth and differentiation (Invertebrates and Vertebrates)
a Growth
a/b Growth and differentiation
b Differentiation
9 Nutrition of embryo (Invertebrates and Vertebrates)

CHARACTER OF INVESTIGATION

(1) Metabolism and respiration
(2) a) Biochemistry, b) Histochemistry, c) Cytochemistry
(3) Physical properties
(4) Physical treatment
(5) Chemical treatment
(6) Influence of hormones and vitamins
(7) Immunology

1 Theoretical problems and general questions

Cairns, J. M. — c
Willier, B. H. — c (6)
Testa, I. — b M

2 Methods and techniques

Bednjakova, Mrs. T. A. and Verejskaja, Miss V. N. — b (4)D
Hašek, M. — a L
Roncoroni, G. — a (2a)M
Tondeur, M. — a (2b)M

3 General subjects

(asexual development, reproduction, etc.)

Johnson, D. C. — a
Spratt, N. T., Jr. — f EV
Sanyal, S. — a B
Nobili, R. — a C
Crisp, D. J. — b D
Hanaoka, K. I. — b D
Ulrich, H. — b D
Hisaoka, K. K. — b I
Te Winkel, Miss L. E. — a I
Sedra, S. N. — c J
Bilewicz, S. — a M
Butler, H. — a M
Gates, A. H. — a, b M
Gothie, Miss M. M. C. S., Moricard, R. and Rodriguez (Galindo), Mrs. M. — a (2a)M
Hunt, E. L. — b M
Kirby, D. R. S. — a M
Mercier (Parot), Mrs. L. — b (6)M
Runner, M. N. — a M
Sukirna, M. — a M
Wells, L. J. — a M
Young, W. C. — a, b M

4 Initial development

a General subjects

Mulnard, J. O. — b (2c)C
Fautrez (Firlefyn), Mrs. N. J. — a (2b)D
Hess, O. — b (2c)E
Aketa, K. — b (2a/c)G
Brookbank, J. W. — a, b (1/2c/7)G
Cheney, R. H. — d (1/5)G
Dan, K. — c G
Hiramoto, Y. — b (3)G
Ishihara, K. — a (2a)G
Maggio, Miss R. — a (1)G
Mohri, H. — a (1)G

Mulnard, J. O. — b (2c)G
Runnström, J. A. M. — c G
Sakai, H. — b G
Yanagisawa, T. — c (2a)G
La Spina, Miss R. — a (2c)H
Aketa, K. — b (2a/c)I
Ito, Sh. — d (3)I
Lopashov, G. V. — d I
Sundell, L.E. — a (1/2)I
Dollander, A. — a, b (3)J
Humphries, A. A. — c (2a)J
Lopashov, G. V. — d J
Minganti, A. — b J
Sundell, L. E. — a (1/2)I
Wartenberg, H. — a (2c)J
Braden, A. W. H. — b M
Dalcq, A. M. — b (2a)M
Fessenden (Cooley), Mrs. L. M. — a M
Gothie, Miss M. M. C. S. — c (2a)M
Guillaud, N. and Moricard, R. — a M
Katsh, S. — (7)M
McLaren, Miss A. — b (6)M

b Primordial germ cells

Bellairs (Morgan), Mrs. M. R. — b L

c Gameto-, ovo- and spermatogenesis

Rogers, A. W. — a
Tyler, A. — c EV+V
Fautrez, J. C. — a (2a)EV
Bielańska (Osuchowska), Mrs. Z. — b (2b)B
Bier, K. — a (2b)D
Grosch, D. S. — a (4/5)D
King, R. C. — a D
Bolognari, A. — a E
Bernstein, G. S. — a G
Brookbank, J. W. — c (2a)G
Ficq, Mrs. A. A. — a (1)G
Mohri, H. — a (1)G
Rawls, J. M. — a (2a)G
Ranzoli, F. — a H
Arndt, E. A. — a (2b)I
Takeuchi, K. — a I
Vannini, E. — a (2)I
Yamamoto, K. — a I
Zahnd, J. P. — b I

Bernstein, G. S. — a J
Bieber, S. — a (1)J
Ficq, Mrs. A. A. — a, b, c (1/2a)J
Finamore, F. J. — a (2a)J
Frazer, J. F. D. — a J
Glenister, T. W. — d (6)J
Kemp, N. E. — a J
Rostand, J. — c J
Stefanelli, A. — d J
Szańkowska, Z. — a (2b)J
Vannini, E. — a (2)J
Zahnd, J. P. — b K
Stefanelli, A. — d L
Austin, C. R. — a M
Beatty, R. A. — d M
Bernstein, G. S. — a M
Bishop, D. W. — a, b, c (1/2a)M
Bodin, N. O., Lindahl, P. E., Brattsand, R., Nordling, E., Thungqvist, L. O. and Uhlin, G. — a M
Bryan, J. H. D. — a (2c)M
Cartier, R., Moricard, R. and Hinglais (Guillaud), Mrs. N. — a M
Glenister, T. W. — d (6)M
Gothie, Miss M. M. C. S., Moricard, R. and Guillon, N. — b M
Graumann, W. — a (2c)M
Harrison, R. G. — a M
Kihlström, J. E. — a M
Lindahl, P. E. and Wedin, K. — c (5)M
MacMillan, E. W. — b M
Narbaitz, R. — a M
Norman, C. — b, c (1/4)M

d Maturation

Bodenstein, D. — b (6)D
Humphries, A. A. — a J
Bryan, J. H. D. — b (2c/4)M
Guillaud, N. and Moricard, R. — a M

e Ovulation and oviposition

Banerjee, S. — a D
Geiger, H. R. — a D
Kawakami, Mrs. K. I. — e E
Sedra, S. N. — c J
Nadamitsu, S. — a M

Strauss, F. — a M

f Activation and fertilization

Allen, R. D. — b (3)EV+V
Benazzi, M. — a C
Colwin, A. L. and Colwin, Mrs. L. H. — a C
Aketa, K. — a (1/2)G
Colwin, A. L. and Colwin, Mrs. L. H. — a G
Endo, Y. — b G
Hagström, B. E. — a, b G
Hori, R. — a (3)G
Hiramoto, Y. — c G
Ishikawa, M. and Sugiyama, M. — a G
Malamed, S. — a G
Nakano, E. — a G
Numanoi, H. — a (2)G
Perlmann, H. P. — a (7)G
Runnström, J. A. M. — a G
Swann, M. M. — a G
Tyler, A. — a G
Colwin, A. L. and Colwin, Mrs. L. H. — a H
Dettlaff, Mrs. T. A. — a, b (2/5)I
Hamano, S. — a I
Hori, R. — a, b (3)I
Ito, Sh. — a, b, c I
Kemp, N. E. — d I
Nakano, E. — a I
Yamamoto, T. — I
Bernstein, G. S. — b J
Shaver, J. R. — a (2a/7)J
Austin, C. R. — a, b M
Beatty, R. A. — c M
Bishop, M. W. H. — a M
Edwards, R. G. — a (7)M
Fessenden (Cooley), Mrs. L. M. — b M
Norman, C. — b M

g Parthenogenesis

Ishikawa, M. and Sugiyama, M. — a G
Runnström, J. A. M. — a G
Witschi, E. — a (1)J
Schlesinger, A. B. — a (2/3)L

5 Cleavage and mitosis

a Cleavage

Butros, J. M. — b (5)G

Dan K. — a G
Hiramoto, Y. — a G
Kojima-Kuno, M. — a G
Marsland, D. A. — b, c (2a/3)G
Runnström, J. A. M. — b G
Swann, M. M. — a G
Zeuthen, E. — a (1)G
Nicholas, J. S. — k V
Lopashov, G. V.— d I
Lopashov, G. V. — d J
Bulmer, D. and Dickson, A. D. — a (1)M
Fessenden (Cooley), Mrs. L. M. — a M

b Mitosis

Kuriki, Y., Okazaki, R. and Okazaki, Mrs. T. — b (1/2)P
Swann, M. M. — b P
Matuszewski, B. — b (2c)D
Kuriki, Y., Okazaki, R. and Okazaki, Mrs. T. — a (1/2)G
Green, Mrs. E. U. — b J
Kuriki, Y., Okazaki, R. and Okazaki, Mrs. T. — a (1/2)J
Lytle, C. F. — b J
Weber, W. — a J
Bryan, J. H. D. — b (2c/4)M

6 Further development of Invertebrates

a General subjects (including complete development)

Allen, R. D. — a (3)EV
Bautzmann, H. — c EV
Mancuso, V. — a (1/2)EV
Reverberi, G. — a EV
Dasgupta, B. — a (2c)P
DeHaan, R. L. — b P
Hanson, E. D. — b (2)P
Schwartz, V. — b P
Brøndsted, H. V. — b A
Hauenschild, C. — b B
Heath, H. D. — b (2a)B
Amy, R. L. — a (4)D
Banarjee, M., Ganguly, D. N., Sarkar, D. N., Banarjee, P., Dev, D. and Bose, B. — a (6)D

Banerjee, B. — a, b (2c) D
Bantock, C. R. — a D
Bednjakova, Mrs. T. A., Ginzburg, G. I. and Ramenskaia, Mrs. G. P. — c (2a) D
Bodenstein, D. — d (6) D
Bookhout, C. G. — c (4) D
Crisp, D. J. — a D
Egelhaaf, A. — b (2a) D
Grosch, D. S. — a (4/5) D
Hadorn, E. — c (2a) D
Jones, B. M. — a (3) D
Jura, Cz., Krysztofowicz, Miss A. and Węglarska, Miss B. — b (2b) D
Kato, M. — a D
Laufer, H. — b (2a) D
Lüdtke, H. — a D
Ludwig, D. — a, b (1) D
Perry, Miss M. M., Selman, G. G. and Waddington, C. H. — c D
Pflugfelder, O. — a (1/6) D
Rockstein, M. — a, b, c (2a) D
Shulov, A. — a, b (1/2) D
Tahmisian, T. N. — a (1) D
Takami, T. — a D
Ulrich, H. — b D
Urbani, E. — a, b (2a) D
George, J. C. — a E
Horstmann, H. J. — a (1) E
Kawakami, Mrs. K. I. — c (1) E
Morrill, J. B. — a (5) E
Lynch, W. F. — b F
Schneider, D. — a F
Black, R. E. L. — b (1/7) G
Céas, Miss M. P. — b (2a) G
Giudice, G. — a (1/2a) G
Immers, J. — a (2a) G
Kaltenbach, Mrs. J. C. and Perlmann, H. P. — a (2/7) G
Nakano, E. — a G
Spiegel, M. — a (2a) G
Tyler, A. — d (7) G
Yamagami, K. — b, c (1/2a) G
Yanagisawa, T. — b, c (1/2a) G
D'Anna, T. — a H
Durante, Miss M. — a (1/2) H
Fischiarolo, G. — b (1) H
Restivo, Miss F. — a (2a) H

b „Primitiventwicklung"

Mancuso, V. — b EV
Mulnard, J. O. — b (2c) C
Clement, A. C. — b, c (1/2c) E
Butros, J. M. — a (1/3) G
Cheney, R. H. — d (1/5) G
Gustafson, T. — a G
Maggio, Miss R. — a (1) G
Monroy, A. — a G
Mulnard, J. O. — b (2c) G
Tyler, A. — b G
Dalcq, A. M. — a (2c) H

c Induction and determination

Mookerjee, S., Sanyal, S., Nagarajan, S. N. and Sinha, A. K. — a B
Hörstadius, S. — a G
Hultin, J. M. T. — a G
Lallier, R. A. — b G
Runnström, J. A. M. — d G
Ortolani, Miss G. — a H

d Development of part of the organism

Piepho, H. — b D

e Development of special organ systems

Integument

Cather, J. N. — a E

Nervous system

Hubl, H. — a C
Aoto, T. — a D
Konok, I. — a, b (2a/4) D
Olsson, R. — b H

Special sense organs

Whittaker, J. R. — b (2a) D

Skeleton

Muscular system

Alimentary tract

Ito, T. — c D

Respiratory organs

Heart, vascular system and blood

Coelomic cavities and endothelia, lymphatic system and connective tissue

Urogenital system and sexual differentiation

Hauenschild, C. — a C
Caspari, E. W. — b (2a)D
Charniaux (Cotton), Mrs H. — a (6)D

Endocrine glands

Konok, I. —— a, b (2a/)D
Pflugfelder, O. — c D

f Histo- and cytogenesis

Alamelu, Mrs. M. G., Mookerjee, S., Waidyasekara, L., Mukerji, Miss D. and Dutta, J. — a P
Hamburger, K., Zeuthen, E. and Plesner, P. — a (1/2a)P
Chowdhury, Miss M., Mookerjee, S. and Ganguly, B. — a A
Bielańska (Osuchowska), Mrs. Z. — b (2b)B
Mulnard, J. O. — b (2c)C
Ray, A. — a (1)D
Baltus, Miss E. J. — a G
Mulnard, J. O. — b (2c)G

7 Further development of Vertebrates

a General investigations

General subjects

Castigli (Pitotti), Mrs. M. — c (1)
Hartwig, H. — a (6)
Kuhn, O. — a (6)
Vanderhaege (Hougardy), Mrs. F. — a
Allen, R. D. — a (3)V
Bautzmann, H. — c V
Perry, Miss M. M. and Waddington, C. H. — a (5)V
Baxter, E. W. — d (1)I
Devillers, Ch. — a I
François, Y. — b (5)I
Gilbert, P. W. — b I
Nakano, E. — a I
Takeuchi, K. — a I
Tracy, H. C. — b I
Trinkaus, J. P. — b I
Yamagami, K. — c (1)I
Zotin, A. I. — a (1)I

Andrew, Miss A. — (2b)J
Bieber, S. — a (1)J
Brachet, J. L. A. — b, c, d (2a/5)J
Cate, G. ten — b, c (2a/4)J
Chen, P. S. — c (2a)J
Cheney, R. H. — f (5)J
Curtis, A. S. G. — a (3)J
Ficq, Mrs. A. A. — c (1/2a)J
Gawronówna, Miss M. — a (6)J
Goto, T. — a (2a)J
Gregg, J. R. — a, b (1)J
Hunt, E. L. — a (1)J
Karasaki, S. — b J
Kemp, N. E. — b (1)J
Kiortsis, V. — c (2a/7)J
Liedke, Mrs. K. B. — a (2b/5)J
Lynn, W. G. — c (4/5)J
Nace, G. W. — a, b (2a/7)J
Nicholas, J. S. — d, e J
Norman, C. — a (2c)J
Pasquini, P. and Petrucci, D. — a (2a)J
Perry, Miss M. M., Selman, G. G. and Waddington, C. H. — c J
Rappaport, R. Jr. — a J
Raunich, L. — e (2)J
Romanovský, A. — a J
Selman, G. G. — a (3)J
Selman, G. G. — c (2a/7)J
Singer, M. — a (5)J
Spiegel, M. — a (2a)J
Stefanelli, A. — c, e (2c)J
Steinberg, M. S. — a J
Stultz, W. A. — a J
Sumiński, E. H. — a J
Tencer, Miss R. — d (1)J
Thomason, Miss D. — a (4)J
Tiedemann, H. — a (2)J
Tiedemann (Waechter), Mrs. H. — a (2)J
Urbani, E. — a (2a)J
Vainio, E. T. — b (7)J
Volpe, E. P. — a (4)J
Yamana, K. — a (2a)J
Yanagisawa, T. — a (1)J
Bautzmann, H. — b AM
Clark, H. — a K
Petry, G. — a K
Barbieri, F. D. — a (4)L
Beard, R. G. — a (7)L

III. 7a

Bermann, F. — a (7)L
Bose, A. — b (4)L
Brachet, J. L. A. — d L
Cate, G. ten — b (2a)L
Clark, H. — a (1)L
Clayton (Freedman), Mrs. R. M. — e (7)L
Croisille, Y. — b, c (7)L
Curtis, A. S. G. — a (3)L
DeHaan, R. L. — b L
Doorenmaalen, W. J. van — c (7)L
Fraser, R. C. — a L
George, J. C. — a L
Goldie, M. — a (2a)L
Hamilton, H. L. — a (1)L
Hašek, M. — a L
Heim, W. G. — b (7)L
Jones, B. M. — a (3)L
Markert, C. L. — d (1)L
Menkes, B. — c (2a)L
Moog, Miss F. — a, b (1/6)L
Petry, G. — a L
Preda, V. — a, b (1/4)L
Romijn, C. — a, b, c (1/3)L
Rudnick, Miss D. — a (1)L
Stefanelli, A. — c, e (2c)L
Tencer, Miss R. — a (2a)L
Trinkaus, J. P. — b L
Watterson, R. L. — c (6)L
Williams, J. — a (2a)L
Willier, B. H. — d (2b)L
Wilt, F. H. — b (5)L
Adams, Miss E. C., Hertig, A. T. and McKay, D. G. — b (2)M
Alexander, G. — a M
Austin, C. R. — a, b M
Bermann, F. — a (7)M
Billingham, R. E. — a (7)M
Bishop, M. W. H. — a M
Braden, A. W. H. — b M
Brambell, F. W. R. — a (7)M
Caspari, E. W. — a M
Curtis, A. S. G. — a (3)M
Edwards, R. G. — a (7)M
Fitzgerald, L. R. — a, c (1/4)M
Halliday, R. — a (7)M
Hašek, M. — b M
Heim, W. G. — b (7)M
Hemmings, W. A. — a (7)M
Hintzsche, E. — a (1)M
Hunt, E. L. — b M
Kirby, D. R. S. — a M
Langman, J. — b (2a)M
Markert, C. L. — d (1)M
Mercier (Parot), Mrs. L. — b (6)M
Miller, J. A., Jr. and Miller (Stone), Mrs. F. — b (1)M
Moog, Miss F. — a, b (1/6)M
Morris, I. G. — a (7)M
Mulnard, J. O. — a (1/2)M
Nicholas, J. S. — d, e (1/2)M
Petry, G. — a M
Roncoroni, G. — b (2a)M
Short, B. F. — a (7)M
Stein, Miss K. F. — b (2b)M
Testa, I. — b M
Tuchman-Duplessis, H. — c (6)M
Urbani, E. — b (2a)M
Waelsch, Mrs. S. Gluecksohn — a M
Wells, L. J. — a M
Wrba, H. — a (1)M
Yamana, K. — a (2a)M

Complete development

Gilbert, P. W. — b I

Partial development

Battle, Miss H. I. — a, b (5)I
Ignatjeva, Mrs. G. M. — a (2a)I
Boell, E. J. — d J
Fitzgerald, L. R. — b (1)M
Vakaet, L. C. — b (6)M

Implantation and placentation

Anderson, J. W. — a (2b)M
Bilewicz, S. — a M
Böving, B. G. — b M
Buchanan, G. D. — a M
Bulmer, D. and Dickson, A. D. — a (2b/6)M
Corner, Jr., G. W., Ramsey, Miss E. M. and W. N. Long — a M
De Feo, V. J. — a M
Gitlin, G. — b, c M
Gothie, Miss M. M. C. S. and Huynh, V. A. — d (2a)M
Graumann, W. — a (2c)M
Hamilton, W. J. and Harrison, R. J. — b M

Moricard, R. and Rodriguez (Galindo), Mrs. M. — c (2a/b)M
Piria, F. and Preto Parvis, Mrs. V. — a (2a/b)M
Prasad, M. R. N. — b, c M
Ramsey, Miss E. M. — b M
Reynolds, S. R. M. — b M
Wells, L. J. — b (5)M
Wimsatt, W. A. — a (2b)M

Development of behaviour

Bautzmann, H. — c V
Armstrong, P. B. — b I
Harris, J. E. and Whiting, H. P. — a I
Tracy, H. C. — a I
Armstrong, P. B. — b J
Székely, G. — a J
McCafferty, R. E. — a (4)L
Menkes, B. — d L
Székely, G. and Szentágothai, J. — b L
Hooker, D. — a, b M
Hooker, D. and Humphrey, Miss T. — a, c M
Humphrey, Miss T. — a M
Lisowski, F. P. — a M
McCafferty, R. E. — a (4)M
Rugh, R. — d (4)M

b „Primitiventwicklung"

Hishida, T. and Nakano, E. — a (1)I
Trinkaus, J. P. — c I
Bautzmann, H. — a J
Green, Mrs. E. U. — a (2c/5)J
Horn, E. C. — b (2c)J
Ikushima, N. — a J
Nedvídek, J. — a (2a)J
Thomason, Miss D. — b (1)J
Candiollo, L. — a L
Deuchar, Miss E. M. — a, b (1/2a/5)L
Emanuelsson, H. — a, b (2a/4/5)L
Horn, E. C. — b (2c)L
Pertusa, J. — a L
Spratt, N. T., Jr. — a, b, e (1/2)L
Trinkaus, J. P. — c L
Adams, Miss E. C., Rock, J., Mulligan, W. J. and Hertig, A. T. — a (2)M

Böving, B. G. — c M
Dalcq, A. M. — a (2c)M
Tondeur, M. — a (2b)M

Early development

Løvtrup, S. — a J

Gastrulation

Céas, Miss M. P. — a (2a)J
Løvtrup, S. — a J
Tencer, Miss R. — c (1)J

Neurulation

Barbieri, F. D. — c (2b)J
Barbieri, F. D. — c (2b)L
Brauckman, Miss E. S. — a (2b)L

Development of neural crest

c Induction, determination, etc.

Induction

Sasaki, N. — a, c (2a/3)V
Becker, U. — a J
Brahma, S. K. — a, c (2/3)J
Finnegan, C. V. — a J
Hama, T. — a (2)J
Ijeiri, Miss S. — a J
Johnen, Miss A. G. — b J
Kawakami, I. — c J
Kuusi, Miss T. K. — a, b, c (5)J
Lallier, R. A. — a J
Mifune, S. — b (2)J
Osawa, S. and Yamada, T. — a J
Sasaki, N. — b J
Saxén, L. O. and Toivonen, S. I. — a J
Takata, K. and Yamada, T. — a J
Tencer, Miss R. — b J
Vahs, W. — a (2)J
Vainio, E. T. — a (2a/7)J
Woerdeman, M. W. — c J
Bagnara, J. T. — b L
Ebert, J. D. — f L
Ijeiri, Miss S. — a L
Kawakami, I. — d L
Woerdeman, M. W. — c L
Kawakami, I. — c M
Mifune, S. — b (2)M
Osawa, S. and Yamada, T. — a M
Takata, K. and Yamada, T. — a M

Determination

Regulation and organization

Bieliavsky, N. — a J
Kawakami, I. — a M

d Development of part of the organism

Head

Milaire, J. — b, c (2)M

Extremities

Milaire, J. — a (2c)V
Stultz, W. A. — b J
Székely, G. — a J
Cairns, J. M. — a L
Székely, G. and Szentágothai, J. — b L
Cairns, J. M. — a M
Hinrichsen, K. — a (2)M
Milaire, J. — c (2c)M

Tail

e Development of special organ systems

Integument

General subjects

Sengel, Ph. — c (5)L
Yamagami, K. — a (2a)M

Exo-skeleton

Teeth

Hinrichsen, K. — a (2)M

Hair, horns, nails

Short, B. F. — b M

Feathers

Cairns, J. M. — b L
Sengel, Ph. — c (5)L

Sense organs

Glands

Cohn, S. A. — b (2)M

Mammae

Pigment cells and patterns

Hama, T. — c (2)I
Matsumoto, J. — a (2a)I
Mori, Y. — b (2)I
Bagnara, J. T. — a (6)J
Eyal (Giladi), Mrs. H. — b J
Hama, T. — c (2)J
Obika, M. — a (2a)J
Ebert, J. D. — c (2b/7)L
Hamilton, H. L. — b L
Koecke, H. U. — d L

Saunders, J. W. — b L
Willier, B. H. — b L
Reams, W. M. Jr. — b M
Saunders, J. W. — b M

Nervous system

General subjects

Ando, S. — a (3)I
Aoto, T. — a I
Tracy, H. C. — a I
Aoto, T. — a J
Bonichon, Miss A. — b (2a/c)L
Székely, G. — a J
Filogamo, G. — a (2a)L
Lavarack, J. O. — a (2)L
Székely, G. and Szentágothai, J. — b L
Preto Parvis, Mrs. V. — a (2c)M

Central nervous system

Olsson, R. — b V
Boell, E. J. — b (1)J
Roofe, P. G., Wenger, Mrs. E. L. and Wenger, B. S. — a (2a/c)J
Roofe, P. G. and Wenger, Mrs. E. L. — b (2b)J
Stultz, W. A. — a J
Tencer, Miss R. — b J
Boell, E. J. — b (1)L
Gayet, J. F. — d (2a/3)L
Preda, V. — b (1)L
Wenger, B. S. — c (2a/b)L
Glass, A. — a (4)M
Menschik, Z. — b (1/6)M

Brain

Miale, Miss I. — a (2b)V
Oksche, A. — a V
Assenmacher, I. A. — a L
Bonichon, Miss A. and Gayet, J. F. — a (2c)L
Filogamo, G. — b (2a)L
Gayet, J. F. — a (2a)L
Gayet, J. F. and Schwander, J. — b (2a)L
Langman, J. — c (2a/7)L
Moszkowska, Mrs. A. — b L
Gyllensten, L. J. W. — c M
Preto Parvis, Mrs. V. — c (2)M

Spinal cord

Accessory organs

Mellinger, J. — a I

Paraphysis
Parietal organ
Pineal body
Oksche, A. — a V
Pflugfelder, O. — b I
Pflugfelder, O. — b J
Pflugfelder, O. — b K
Andres, M. Y. — a L
Pflugfelder, O. — b L
Venzke, W. G. — a L

Hypophysis (see also under endocrine glands)
Guardabassi, Miss A. and Mazzi, V. — a J
Assenmacher, I. A. — a L

Ganglia
Nerves
Para- and sympathetic and intramural nervous system
Guth, L. — a M

Meninges

Special sense organs

Nasal organ
Eye
Ber, A. — a (6)J
Stone, L. S. — e J
Amprino, R. M. — d (2b)L
Harrison, J. R. — a L
Meyer, D. B. and O'Rahilly, R. — a (2b)L

Eye (s.s.)
Stroëva, Miss O. G. — c (5)J
Britt, Miss L. G. and Herrmann, H. — a (2a)L
Coulombre, A. J. and Coulombre, J. L. — a, c (2b)L

Lens
Sasaki, N. — a V
Cate, G. ten — a (2)J
Beloff, Mrs. R. H. — a (2a/7)L
Cate, G. ten — a (2)L
Doorenmaalen, W. J. v. — a (2b)L
Langman, J. — a (2a/7)L
Papaconstantinou, J. — a (2a/7)L

Ear

Skeleton

General subjects
Kieny, Mrs. M. A. — a (1)L
Graumann, W. — a (2b)M

Embryonic temporary endo-skeleton
Skull and visceral skeleton
Truncal skeleton
Ganguly, D. N. and Sarkar, D. N. — c (2b)J
Lavarack, J. O. — a (2)L

Skeleton of extremities
Joints

Muscular system

General subjects
Laufer, H. — a (2a/7)J
Muchmore, W. B. — a (2a)J
Wilde, C. E., Jr. — c (2a)J
Bonichon, Miss A. — c (2c)L
Hayashi, Y. — a (2a)L
Herrmann, H. and Love, D. S. — a (2a)L
Wilt, F. H. — c (1)L

Skeletal muscles (head, trunk and tail)
Deuchar, Miss E. M. — a, b (1/2a/5)L

Visceral muscles (head and trunk)
Muscles of extremities
Wenger, B. S. — b (2a)L

Alimentary tract

General subjects
Mouth- and pharyngeal cavities
Intestinal tract
Bondi, C. — c J
Sigot, M. — a (2a)L
Konopacka, Mrs. B. — a (2)M

Proctodaeum
Salivary glands
Liver
Armstrong, P. B. — a I
Armstrong, P. B. — a J
Cate, G. ten — b (2a)J
Cate, G. ten — b (2a)L
Dieterlen (Lièvre), Mrs. F. — b (6)L
Fraser, R. C. — e (2a)L

Pancreas

Respiratory organs

General subjects
Boell, E. J. — c J

External gills
Internal gills
Lungs and larynx
Reynolds, S. R. M. — c M

Heart, vascular system and blood

General subjects

Heart

Grodziński, Z. — a I
Gyévai, T. A. — a (2b)J
DeHaan, R. L. — a L
Ebert, J. D. and Ruth, R. F. — a, b (1/2a/7)L
Hall, E. K. — a (5)M

Arterial and venous system

Reynolds, S. R. M. — a, c, d M

Capillary system

Blood

Beard, R. G. — a (7)L
Colle (Vandevelde), Mrs. A. — a (2b)
Coleman, J. R. — a (2a/7)L
D'Amelio, V. — a (2a)L
Heim, W. G. — b (2a)L
Lemež, L. — a L
O'Brien, B. R. A. — a (2a)L
Venzke, W. G. — b L
Heim, W. G. — b (2a)M
Jones, O. P. — b M

Coelomic cavities and endothelia, lymphatic system and connective tissue

Coelomic cavities and endothelia

Lymphatic system

Rogers, A. W. — a
Ruth, R. F. — b (2c)L
Ruth, R. F. — b (2c)M

Connective tissue

Edds, M. V., Jr. — a J
Preto Parvis, Mrs. V. — b (2b)L
Reams, W. M. Jr. — b M
Walker, B. E. — d (2b)M

Urogenital system and sexual differentiation

General subjects

Stenger (Haffen), Mrs. K. E. — b (1)L
Backhouse, K. M. — a M

Kidneys; nephric ducts and bladder

Lynn, W. G. — b J
Stangaard, B. C. — a L
Beam, J. R. and Harris, F. T. C. — a M

Konopacka, Mrs. B. — b (2b)M

Gonads

Aoto, T. — b J
Foote, Ch. L. and Foote, Mrs. F. M. — b J
Kotani, M. — b (2b)J
Mancino, G. — a J
Yoshikura, M. — c (4/6)J
Stéfan, Miss Y. and Vivien, J. H. — a K
Groenendijk (Huijbers), Mrs. M. M. — b (6)L
Bielańska (Osuchowska), Mrs. Z. — a (2b)M

Genital tract

Stéfan, Miss Y. and Vivien, J. H. — a K
Clegg, E. J. — a M
Corner, G. W. — a M

Accessory glands

Clegg, E. J. — a M

Sexual differentiation

Aoto, T. — b J
Scheib (Pfleger), Mrs. D. — a (2b)L
Sigot, M. — b (2a)L
Stenger (Haffen), Mrs. K. E. and Wolff, Et. C. — a L
Stoll, R. — b L
Burns, R. K. — a M
Jost, A. D. — b M

Endocrine glands

General subjects

Gallien, L. — d V
Witschi, E. — f V
Ford, P. — a I
Hay, Miss D., Vivien, J. H. and Schott, Miss J. — c I
Querner, H. — a I
Hay, Miss D., Vivien, J. H. and Schott, Miss J. — c J
Dimond, Sister M. T. — a K
Deth, J. H. M. G. van — a L
Moog, Miss F. — b L
Watterson, R. L. — d (6)L
Deth, J. H. M. G. van — a M
Graumann, W. — a (2b)M

Jost, A. D. — a M
Moog, Miss F. — b M
Vakaet, L. C. — b M

Hypophysis (see also under nervous system)

Nowakówna, Miss J. — a V
Radecka, Mrs. E. Erdman — a V
Sembrat, K. — c V
Hay, Miss D. — b J
Nonaka, T. — b J
Schott, Miss J. — b J
Thurmond, W. — a J
Groenendijk (Huijbers), Mrs. M. M. — b L
Moszkowska, Mrs. A. — b L
Tixier (Vidal), Mrs. A. — b, c, d L

Thymus

Thyroid gland

Carpenter, Miss E. — b, c (6) V
Nowakówna, Miss J. — a V
Radecka, Mrs. E. Erdman — a V
Sembrat, K. — c V
Lieber, Miss A. — a I
Gawronówna, Miss M. — a J
Kościelski, B. — a J
Lynn, W. G. — a J
Nonaka, T. — b J
Pflugfelder, O. — e (5) J
Dossel, W. E. — a, b (7) L
Hilfer, S. R. — b L
Pflugfelder, O. — e (5) L
Stoll, R. — a L
Tixier (Vidal), Mrs. A. — d, e (2a/4) L

Parathyroid glands

Boschwitz, Miss B. D. — a J
Gaillard, P. J. — a L

Gonads

Leroy, P. J. M. — a L
Benirschke, K. — a M

Adrenals

Perrenot, Miss M. — a L
Willier, B. H. — a L
Kuński, H. — a (2b) M

Pancreas

Dieterlen (Lièvre), Mrs. F. — b L

f Histo- and cytogenesis

Fedoroff, S. — a (2/4)

Hisaoka, K. K. — a (2b/5) I
Kanoh, Y. and Yamamoto, T. S. — b (2c) I
Barbieri, F. D. — b (2c) J
Boell, E. J. — a (2c) J
Deuchar, Miss E. M. — c (2a) J
Finamore, F. J. — b, c (2c) J
Moore, Mrs. B. C. — b (2c) J
Nace, G. W. — c (7) J
Schreiber, G. — a J
Wallace, H. — a J
Barbieri, F. D. — b (2c) L
Bellairs (Morgan), Mrs. M. R. — a L
Gayet, J. F. — d (2a/3) L
Lavarack, J. O. — a (2b) L
Preto Parvis, Mrs. V. — b (2b) L
Graumann, W. — a (2b) M
Jirásek, J. — b (2b) M
Konopacka, Mrs. B. — c (2b) M
Lojda, Z. — a (2b) M
Martin, B. F. — a (2b) M
Perkowska, Mrs. E. M. — a (2a) M
Schreiber, G. — a M
Walker, B. E. — d (2b) M
Wyttenbach, C. R. — a (7) M

8 Growth and differentiation

- (Invertebrates and Vertebrates)

a Growth

Mitchison, J. M. — a P
Swann, M. M. — b P
Banerjee, B. — b (2c) D
Ito, T. — c D
Rockstein, M. — a D
Tuft, P. H. — a D
Wurmbach, H. — a (6) V
Baxter, E. W. — c I
Tuft, P. H. — a I
Andres, G. — a J
Green, Mrs. E. U. — a (2c/5) J
Heath, H. D. — a J
Rappaport, R., Jr. — a J
Tisna-Amidjaja, D. A. — a J
Tuft, P. H. — a J
Weber, W. — a J
Wurmbach, H. — b J
Andres, G. — a L
Cairns, J. M. — a L
Emanuelsson, H. — b (4/5) L
Veneziano, P. P. — g L

Wurmbach, H. — b L
Beatty, R. A. — c M
Cairns, J. M. — a M
Heim, W. G. — a M

a/b Growth and differentiation

Agrell, I. P. S. — a
Gustafson, T. — b (1)
Vanderhaege (Hougardy), Mrs. F. — a
Hamburger, K., Zeuthen, E. and Plesner, P. — a (1/2a)P
Rulon, G. O. — a (5)G
Lopashov, G. V. — d I
Foote, Ch. L. and Foote, Mrs. F. M. — b J
Liedke, Mrs. K. B. — a (5)J
Lopashov, G. V. — a, b, d J
Stefanelli, A. — c J
Croisille, Y. — b L
Ebert, J. D. — d L
Harris, M. — a L
Herrmann, H. and Klein, N. W. — b (2a)L
Stefanelli, A. — c L
Bryan, J. H. D. — d (2a)M
Harris, M. — a M

b Differentiation

Clark, H. — d
Nagarajan, S. N. — a B
Sirlin, J. L. — a (1)D
Hultin, J. M. T. — a G
Perlmann, H. P. — a (7)G
Trinkaus, J. P. — a I
Clayton (Freedman), Mrs. R. M. — a (7)J

Grant, Ph. — a (2a)J
Matsumoto, A. — a J
Nedvídek, J., Sládeček, F. and Romanovský, A. — b J
Niu, M. C. — a (2a)J
Sirlin, J. L. — a (1)J
Wilde, C. E., Jr. — b, c (2)J
Adhikari, S., Mookerjee, S., Nurjehan, Miss B. and Ghosal, S. — b (5)L
Grabowski, C. T. — a, b, c L
Hilfer, S. R. — b (2a)L
Markert, C. L. — c L
McCallion, D. J. — b (5)L
Sirlin, J. L. — a (1)L
Trinkaus, J. P. — a L
Clayton (Freedman), Mrs. R. M. — d (7)M
Konopacka, Mrs. B. — c (2b)M
Markert, C. L. — c M

9 Nutrition of embryo

(Invertebrates and Vertebrates)

Ito, T. — c D
Baxter, E. W. — c I
Tisna-Amidjaja, D. A. — a J
Harrison, J. R. — a L
Schlesinger, A. B. — a L
Spratt, N. T., Jr. — a L
Williams, J. — a L
Willier, B. H. — d (2b)L
Witschi, E. — g L
Menschik, Z. — a M
Runner, M. N. — b M
Wrba, H. — a M

IV. DEVELOPMENT AND GENETICS

SUBDIVISION

1 Theoretical problems and general questions
2 General genetical studies
a General studies
b Heteroploidy
c Hybridization
d Chimaerae
e Merogony

3 Analysis of influence of special genes and mutants
a Special genes and mutants
b Lethal factors
4 Phenocopies

CHARACTER OF INVESTIGATION

(1) Metabolism and respiration
(2) a) Biochemistry, b) Histochemistry, c) Cytochemistry
(4) Physical treatment
(6) Influence of hormones and vitamins

1 Theoretical problems and general questions

Landauer, W. — e L
Runner, M. N. — d M

2 General genetical studies

a General studies

Agrell, I. P. S. — b
Anders, G. — a
Kerr, N. S. — b P
Nagarajan, S. N. — a B
Benazzi, M. — a C
Hauenschild, C. — a C
Masetti Zannini, Miss A. — a C
Papi, F. — a C
Astaurov, B. L. — d (4) D
Baffoni, G. M. — c D
Bantock, C. R. — a D
Barigozzi, C. — a D
Borstel, R. C. von — a D
Charniaux (Cotton), Mrs. H. — b D
Chovnick, A. — c, d D
Counce, Miss S. J. — c D
Ede, D. A. — a D
Geyer (Duszyńska), Mrs. I. — a, b, c (4) D
King, R. C. — a D
Kroeger, H. — a, b (1) D
Ludwig, D. — c D
Matuszewski, B. — a D
Poulson, D. F. — b, d D
Rockstein, M. — c D
Rothenbuhler, W. C. — a, b D
Ulrich, H. — a (4) D
Wolsky, A. — b D
Ranzoli, F. — d E
Baxter, E. W. — b I
Hishida, T. — c I
Takeuchi, K. — b I
Billett, F. S. — a (2a) J
Blackler, A. W. C. — a J
Bondi, C. — b J
Briggs, R. W. and King, T. J. — a J
Briggs, R. W. and Humphrey, R. R. — c J
Curtis, A. S. G. — a J
Fischberg, M. — a J
Gurdon, J. B. — a, b J
Hamilton, Miss L. — c (2a) J
Humphries, A. A. — b J
King, Th. J. and McKinnell, R. G. — b J
King, Th. J. and Subtelny, S. — a J
Lopashov, G. V. — b J
Moore, J. A. — a J
Nedvídek, J. — a (2a) J
Nedvídek, J., Sládeček. F. and Romanovský, A. — b J
Newth, D. R. — b (2a) J
Volpe, E. P. — b J
Witschi, E. — c J
Belluomini, H., Hoge, A. and Schreiber, G. — a K
Curtis, A. S. G. — a L
Harris, M. — a L
Mintz, Miss B. — b L
Witschi, E. — c L
Beatty, R. A. — b, d M
Billingham, R. E. — a M
Braden, A. W. H. — a M
Caspari, E. W. — a M
Chachulska, W. — b M
Curtis, A. S. G. — a M
Dagg, C. P. — b M
Degenhardt, Mrs. K. H. — c M

Fraser, F. C. — b M
Harris, M. — a M
Harrison, G. A. — a, b, c (4) M
Hinrichsen, K. — b M
Huber, W. — a M
Makino, S. — c M
McLaren, Miss A. — a M
Mintz, Miss B. — b M
Popp, R. A. — a M
Rugh, R. — a M
Short, B. F. — b M
Waelsch, Mrs. S. Gluecksohn — b M
Witschi, E. — c M

b Heteroploidy

Benazzi, M. — a C
Costello, D. P. and Henley, Miss C. — a C
Astaurov, B. L. — a D
Astaurov, B. L. and Verejskaja, Miss V. N. — e D
Rothenbuhler, W. C. — b D
Urbani, E. — b (2a) D
Beeson, Miss G. E. — a E
Häggqvist, G. — b V
Brandom, W. F. — a J
Costello, D. P. and Henley, Miss C. — a J
Fankhauser, G. — a, b, c (2a) J
Gallien, L. — b J
Hamilton, Miss L. — a J
Moore, Mrs. B. C. — c (1) J
Rostand, J. — a J
Schreiber, G. — a J
Beatty, R. A. — a M
Edwards, R. G. — b M
Schreiber, G. — a M
Urbani, E. — b (2a) M

c Hybridization

Astaurov, B. L. — b D
Astaurov, B. L. and Verejskaja, Miss V. N. — e D
Wolsky, A. — b D
Baltzer, F. and Chen, P. S. — a (2a) G
Céas, Miss M. P. — c (2a) G
Hagström, B. E. — b, c G
Moore, A. R. — b G
Ubisch, L. v. — c G
Minganti, A. — a, c H

Benazzi, M. — b J
Brachet, J. L. A. — a (1) J
Brandom, W. F. — a, b J
Gregg, J. R. — a, b (1) J
Hamilton, Miss L. — b J
Kawamura, T. — a J
Mancino, G. — a J
Moore, Mrs. B. C. — a, c (1/2) J
Moore, J. A. — c J
Romanovský, A. — a J
Tisna-Amidjaja, D. A. — b J
Volpe, E. P. — c J
Hašek, M. — e L
Leroy, P. J. M. — b L
Edwards, R. G. — b M

d Chimaerae

Tartar, V. — b P
Mitchison, N. A. — a L
Wolff, Et. — f L
Wolff, Et. — f M

e Merogony

Astaurov, B. L. — b D
Ubisch, L. v. — d G
Minganti, A. — c H
Lopashov, G. V. — c I
Hadorn, E. — a J
Hamilton, Miss L. — b J
Lopashov, G. V. — c J
Moore, Mrs. B. C. — c (1) J

3 Analysis of influence of special genes and mutants

a Special genes and mutants

Perry, Miss M. M. and Waddington, C. H. — b
Castiglioni, Miss M. C. — c (2) D
Chovnick, A. — a, b (1) D
Counce, Miss S. J. — a, b D
Egelhaaf, A. — a (2a) D
Fujii, S. — a D
Kaji, S. — a D
Kühn, A. — a, b, c (2) D
Löbbecke, E. A. — a, b D
Poulson, D. F. — c, d D
Waddington, C. H. — b D
Wolsky, A. — a D
Hishida, T., Yamamoto, T. and Tomita, H. — b I
Kajishima, T. — a I

Rostand, J. — b J
Hollander, W. F. — d L
Kieny, Mrs. M. A. and Wolff, Et. C. — b L
Landauer, W. — a, c L
Mintz, Miss B. — a L
Nissen, Th. — a L
Zwilling, E. — c L
Bryan, J. H. D. — c M
Clayton (Freedman), Mrs. R. M. — b M
Grüneberg, H. — a M
Hollander, W. F. — a, c M
Hummel, Miss K. P. — a, b M
Jost, A. D. — c M
Markert, C. L. — a M
McNutt, C. W. — a, b M
Mintz, Miss B. — a M
Stein, Miss K. F. — a, b, c (2b) M
Stevens, L. — b M
Truslove, Miss G. M. — a M

b Lethal factors

Chen, P. S. — b (2a) D

Chovnick, A. — b (1) D
Hadorn, E. — b D
Imaizumi, T. — a D
Shiomi, T. — a D
Welch, R. M. — a, b (1/2c) D
Fischberg, M. — b J
Humphrey, R. R. — a, b J
Moore, Mrs. B. C. — a (1) J
Ede, D. A. and Kelly, W. A. — b L
Bennett, Miss D. — a (2a) M
Hollander, W. F. — a, b M
Hummel, Miss K. P. — a M

4 Phenocopies

Inouye, I., Takaya, H. and Kaji, S. — a D
Kühn, A. — b D
Wolsky, A. — a D
Landauer, W. — d L
Runner, M. N. — c (1) M
Walker, B. E. — b M

V. DEVELOPMENT AND PATHOLOGY

SUBDIVISION

1 Theoretical problems and general questions
2 General investigations in pathological development
- a General subjects
- b Relation between host and graft
- c Pathological influence of chemical treatment and deficiencies
- d Pathological influence of physical treatment
- e Teratology

3 Development of special malformations and pathological development of special organs
- a Development of special malformations
- b Pathological development of special organs

(Cf. general subdivision p. 173—175)

4 Tumours

1 Theoretical problems and general questions

Clegg, E. J. — b M
Runner, M. N. — d M

2 General investigations in pathological development

a General subjects

Fedoroff, S. — b
Goube de Laforest, P. — a
Geigy, R. — c D
Yajima, H. — b D
Okada, Y. K. — a E
Lutz, H. and Lutz (Ostertag), Mrs. Y. — c I
Shaver, J. R. — b J

Wurmbach, H. — b J
Ashley, G. T. — a V
Corliss, C. E. — c L
Ebert, J. D. — f L
Ede, D. A. and Kelly, W. A. — c L
Grabowski, C. T. — d L
Lutz, H. — b L
Lutz, H. and Lutz (Ostertag), Mrs. Y. — e L
Mintz, Miss B. — b L
Robertson, G. G. — a L
Wolff, Et. — a L
Wurmbach, H. — b L
Bartelmez, G. W. — d M
Degenhardt, Mrs. K. H. — d M
Giroud, A. — b M
Gothie, Miss M. M. C. S., Moricard, R. and Guillon, N. — b M
Gyllensten, L. J. W. — b (1) M
Hunt, E. L. — b M
Lefebvres (Boisselot), Mrs. J. — b M
McCafferty, R. E. — b M
Miller, J. A., Jr. and Miller (Stone), Mrs. F. — b M
Mintz, Miss B. — b M
Nishimura, H. — a M
Roux, Ch. — a, b M
Wells, L. J. — a M

b Relation between host and graft

Anton, H. J. — b J
Bondi, C. — b J
Ebert, J. D. — e L
Hašek, M. — c L
Nicholas, J. S. — h L
Huygnard, C. — a M
Nicholas, C. — a M

c Pathological influence of chemical treatment and deficiencies

Kuhn, O. — c
Cheney, R. H. — e G
Harvey, Mrs. E. B. — g G
Hisaoka, K. K. — a, d I
Cheney, R. H. — f J
Green, Mrs. E. U. — a J
Raunich, L. — d J
Singer, M. — a J
Takahashi, H. — b J

Bagiński, S. — b L
Landauer, W. — b L
Veneziano, P. P. — b L
Corliss, C. E. — b M
Fraser, F. C. — a M
Giroud, A. — a M
Lefebvres (Boisselot), Mrs. J. — a, b M
Martinet, Mrs. M. — a, b M
Menschik, Z. — a, b M
Mercier (Parot), Mrs. L. — a, b M
Roux, Ch. — a M
Tuchman-Duplessis, H. — b, c M
Walker, B. E. — b M
Wei (Cheng), Mrs. D. — a M

d Pathological influence of physical treatment

Kirrmann, J. M. — a
Astaurov, B. L. — c EV+V
Hanson, E. D. — a P
Benazzi, M. — c C
Astaurov, B. L. — c, d D
Bednjakova, Mrs. T. A. — a D
Borstel, R. C. von — b D
Geyer (Duszyńska), Mrs. I. — b D
Shiomi, T. — b D
Tahmisian, T. N. — a, b, c D
Ulrich, H. — a D
Verejskaja, Miss V. N. — a D
Yajima, H. — a D
Cheney, R. H. — e G
O'Brien, J. P. — d V
Welander, A. D. — a I
Borden, J. van der and Trampusch, H. A. L. — a J
Gallien, L. — e J
Holtfreter, J. K. F. — c J
Liotti, F. S. — b J
Luther, W. — b J
O'Brien, J. P. — a, c J
Perri, T. — c J
Peters, Th. — a J
Reyss-Brion (Ducreau), Mrs. M. — a, b J
Stinson, B. D. — c J
Thomason, Miss D. — a J
Wagner, G. — a J
Wehrmaker, A. — a J
Raynaud, A. — c K
Bagiński, S. — c L

Barbieri, F. D. — a L
Mintz, Miss B. — a L
Reyss-Brion (Ducreau), Mrs. M. — a L
Borden, J. van der and Trampusch, H. A. L. — a M
Bryan, J. H. D. — b, c M
Chase, H. B. — c M
Glass, A. — a M
Hašek, M. — d M
Hicks, S. P. — a, b M
Hintzsche, E. — c M
Hollander, W. F. — b, c M
Kameyama, Y. and Murakami, U. — b M
Luther, W. — b M
Mintz, Miss B. — a M
O'Brien, J. P. — c M
Pantelouris, E. M. — a M
Rugh, R. — c M

e Teratology

Krause, G. — a D
Moore, A. R. — c G
Bagiński, S. — a L
Hampé, A. — c L
Wolff, Et. — a L
Giroud, A. — c M
Millen, J. W. — a M
Shaner, R. F. — b M
Woollam, D. H. M. — a M

3 Development of special malformations and pathological development of special organs

a Development of special malformations

Witschi, E. — b V
Takeuchi, K. — b I
Mangold, O. — d J
Rostand, J. — b J
Landauer, W. — c L
Orts Llorca, F. — a L
Veneziano, P. P. — b,c L
Watterson, R. L. — b (6)L
Adams, Miss E. C., McKay, D. G., Benirschke, K. and Hertig, A. T. — c (2)M
Chase, H. B. — a M

Fraser, F. C. — b M
Hicks, S. P. — b M
Jost, A. D. — c M
Settle, G. W. — a M
Walker, B. E. — b M

b Pathological development of special organs

Tuchman-Duplessis, H. — a M

Integument

Nissen, Th. — a L

Nervous system

Olsson, R. — b H
Olsson, R. — b V
Watterson, R. L. — b (6)L
Delmas, A. — b M
Eayrs, J. T. — a M
Giroud, A. — d M
Gyllensten, L. J. W. — b (1)M
Hogue, Miss M. J. — a, b M
Huber, W. — a M
Kameyama, Y. and Murakami, U. — a M
Menschik, Z. — b M
Sinclair, J. G. — b M
Windle, W. F. — c M

Special sense organs

Castiglioni, Miss M. C. — b D
Orts Llorca, F. — b L
Delmas, A. — b M
Gyllensten, L. J. W. — b (1)M
Rugh, R. — c M

Skeleton

Felts, W. J. L. — c M
Ford, E. H. R. — b M

Muscular system

Alimentary tract

Respiratory organs

Harris, J. W. S. — a M
Kleiss, E. — a M
Gyllensten, L. J. W. — b (1)M

Heart, vascular system and blood

Dankmeijer, J. and Los, J. A. — a V
Grabowski, C. T. — e L
Mitchison, N. A. — a L
Rychter, Z. — b L
Stéphan, Fr. — b L

Dankmeijer, J., Snellen, H. A., Dekker, Miss A. and Ingen, Miss H. C. van — d M
Reis, R. H. — a, b M
Shaner, R. F. — a, c, d M
Sinclair, J. G. — b M

Coelomic cavities and endothelia, lymphatic system and connective tissue

Mitchison, N. A. — a L

Urogenital system

Michalowski, J. — a, b J
Boyer, C. C. — b M
Stevens, L. — a M

Endocrine glands

Pflugfelder, O. — e J
Pflugfelder, O. — e L

4 Tumours

Vanderhaege (Hougardy), Mrs. F. — a
Wolff, Mrs. Em. and Wolff, Et. — b
Barigozzi, C. — a D
Castiglioni, Miss M. C. — a D
Vainio, E. T. — c V
Witschi, E. — b V
Hisaoka, K. K. — c I
Curtis, A. S. G. — a J
Inoue, S. — b J
Kawakami, I. — c J
King, Th. J. and McKinnell, R. G. — b J
Norman, C. — a J
O'Brien, J. P. — b J
Rafferty, K. A. Jr. — a J
Ruben, L. N. — a 1 J
Saxén, L. O. and Toivonen, S. I. — a J
Shaver, J. R. — b J
Spirito, A. — a J
Yamana, K. — a J
Curtis, A. S. G. — a L
Ebert, J. D. — f L
Ede, D. A. and Kelly, W. A. — c L
Fraser, R. C. — d L
Källén, A. J. B. — b L
Koecke, H. U. — a L
Menkes, B. — e L
Saunders, J. W. — g L
Curtis, A. S. G. — a M
Heim, W. G. — a M
Horn, E. C. — a M
Kawakami, I. — c M
Koecke, H. U. — a M
Makino, S. — a, b, c M
Saunders, J. W. — g M
Sigot (Luizard), Mrs. M. F. — a M
Wrba, H. — c M
Yamana, K. — a M

VI. REGENERATION

SUBDIVISION

1 Theoretical problems and general questions
2 General investigations, including total regeneration
3 Partial regeneration
a General subjects
b Tail regeneration
c Limb regeneration
d Regeneration of special organ systems
(Cf. general subdivision p. 173—175)

CHARACTER OF INVESTIGATION

(4) Physical treatment
(5) Chemical treatment
(6) Influence of hormones and vitamins

1 Theoretical problems and general questions

Polezhaev, L. V. — b J

2 General investigations, including total regeneration

Kuhn, O. — d
Tartar, V. — a P
Chowdhury, Miss M., Mookerjee, S. and Ganguly, B. — a A
Ganguly, B. — a A
Heath, H. D. — b B
Miller, J. A., Jr. — a B
Mookerjee, S., Sanyal, S., Nagarajan, S. N. and Sinha, A. K. — a B
Nagarajan, S. N. — a B
Pasquini, P. and Petrucci, D. — b B
Penzlin, H. — a B
Sinha, A. K. — a B
Stagni, Miss A. — a B
Bondi, C. — a C
Brøndsted, H. V. — a C
Crowell, P. S. — b C
Engelbrecht, D. van Z. — a C
Ghirardelli, E. — b C
Greca, M. La — b C
Hubl, H. — a, b C
Ichikawa, A. — b C
Kanatani, H. — a, b, c C
Kawakami, Mrs. K. I. — a C
Lender, Th. — a C
Moment, G. B. — a, c C
Needham, A. E. — a C
Paschma, M. — a C
Pasquini, P. and Petrucci, D. — b C
Paterson, Miss M. C. — a C
Ranzoli, F. — b C
Rulon, G. O. — b (5) C
Sengel, Miss C. — a C
Spratt, N. T., Jr. — c C
Stagni, Miss A. — b C
Stéphan (Dubois), Mrs. Fr. — a C
Sugino, H. — a C
Török, L. J. — a C
Wolff, Et. — c C

Ghirardelli, E. — a F
Schneider, D. — c F
Butler, E. G. — b H
Jochems, D. J. and Trampusch, H. A. L. — a J
Polezhaev, L. V. — b J
Rieck, A. F. — c (5) J
Ruben, L. N. — a 1 J
Woerdeman, M. W. — c J
Woerdeman, M. W. — c L
Jochems, D. J. and Trampusch, H. A. L. — a M

3 Partial regeneration

a General subjects

Sengel, Miss C. — a C
Laufer, H. — b D
Penzlin, H. — b D
Morgan, Miss J. A., Stock, A. and O'Farrell, A. F. — a (6) D
Kawakami, Mrs. K. I. — c, d E
Okada, Y. K. — b E
Nowakówna, Miss J. — a (6) V
Radecka, Mrs. E. Erdman — a (6) V
Sembrat, K. — c (6) V
Wurmbach, H. — a (6) V
Anton, H. J. — a, c J
Bieber, S. — a J
Dent, J. N. — a J
Green, Mrs. E. U. — b J
Inoue, S. — a (6) J
Kielbówna, Miss L. — a (6) J
Kiortsis, V. — c, d J
Luther, W. — b (4) J
Newth, D. R. — a J
Rieck, A. F. — a (6) J
Schmidt, A. J. — a, b (6) J
Singer, M. — b, c J
Stefanelli, A. — e J
Stinson, B. D. — b J
Wolff, Et. — c J
Stefanelli, A. — e L
Abercrombie, M. — c M
Harris, P. F. — a M
Luther, W. — b (4) M
McMinn, R. M. H. — a M
Swartz, G. E. — a M

b Tail regeneration

Goodrich, H. B. — a I

Hess, O. — c J
Kiortsis, V. — b J
Kucias, J. — a J
Wróblewski, R. — b J
New, D. A. T. — b K

c Limb regeneration

Goss, R. J. — a I
Hampé, A. — c L
Löbbecke, E. A. — b D
Wolsky, A. — c D
Butler, E. G. — a, c, d (4) J
Deck, J. D. — a, b, c J
Dimitrova, Miss A. — a (4) J
Faber, J. — a, b, c, d, e J
Fraser, R. C. — c J
Frye, B. E. — a (6) J
Goss, R. J. — c J
Harrebomée, Miss A. E. and Trampusch, H. A. L. — a (4) J
Hilfer, S. R. — a (6) J
Ijeiri, Miss S. — b J
Kiortsis, V. — a J
Laufer, H. — a, c J
Lazard (Hauben), Mrs. L. — a J
Luther, W. — a J
Manner, H. W. — a (5) J
Rieck, A. F. — b J
Singer, M. — a, b, c (5) J
Stinson, B. D. — a, d (4/6) J
Thornton, C. S. — a, b, c J
Trampusch, H. A. L. — a J
Trampusch, H. A. L. and Verwoerd, C. D. A. — e (4) J
Yntema, C. L. — b J

d Regeneration of special organ systems

Pohley, H. J. — a, b D

Integument

Goss, R. J. — d I
Bagnara, J. T. — a J
Luther, W. — a J
Wolsky, A. — c J
Billingham, R. E. — b M
Goss, R. J. — e M
Polezhaev, L. V. — d M

Nervous system

Bodenstein, D. — a D
Olsson, R. — b H
Olsson, R. — b V

Stefanelli, A. — b V
Kollros, J. J. — c, e J
Erhart, E. A. — a L
Menkes, B. — b L
Polezhaev, L. V. — c M
Windle, W. F. — a M

Special sense organs

Kido, T. — b C
Hasegawa, M. — a I
Eguchi, G. — a, b J
Frost, D. — a J
Mina, E. Y. — b J
Reyer, R. W. — b J
Reyer, R. W. and Stone, L. S. — a J
Sembrat, K. — d J
Setoguti, T. — a, b (2b) J
Steinitz, H. — a, b, c J
Stone, L. S. — a, b, c J
Stroëva, Miss O. G. — a, c (5) J
Vigh, B. — a J
Wolsky, A. — c J
Doorenmaalen, W. J. van — b L
Woerdeman, M. W. — a L
Stroëva, Miss O. G. — a M
Woerdeman, M. W. — a M

Skeleton

Goss, R. J. — b J
Polezhaev, L. V. — a M

Muscular system

Dimitrova, Miss A. — b M

Alimentary tract

Kido, T. — a C
O'Steen, W. K. — a, b J
Hasegawa, M. — b L
Fortak, W. — a M
Wilson, J. W. — a M

Respiratory organs

Heart, vascular system and blood

Polezhaev, L. V. — d M

Coelomic cavities and endothelia, lymphatic system and connective tissue

Urogenital system

Follenius, E. and Vivien, J. H. — a I

Endocrine glands
Belka, A. — a
Chachulska, W. — a
Pluta, E. — a, b
Heckerman, R. O. — b L
Wróblewski, R. — a M

VII. METAMORPHOSIS

SUBDIVISION

1 Theoretical problems and general questions
2 General investigations
a General subjects
b Hormones and metamorphosis
c Metamorphosis of part of the organism
d Metamorphosis of special organ systems
(Cf. general subdivision p. 173—175)

CHARACTER OF INVESTIGATION

(5) Chemical treatment

1 Theoretical problems and general questions

2 General investigations

a General subjects

Hauenschild, C. — a C
Bookhout, C. G. — b, c D
Bückmann, D. — a D
Egelhaaf, A. — b D
Gloor, H. J. — a D
Hadorn, E. — d D
Harada, M. — a D
Ito, T. — a (1) D
Laufer, H. — b D
Piepho, H. — a D
Pohley, H. J. — a, b D
Rockstein, M. — a, b D
Ulrich, H. — b D
Urbani, E. — a D
Ursprung, H. — a D
Lynch, W. F. — a (5) F
Harvey, Mrs. E. B. — c G
Brewin, B. I. — a H
Lynch, W. F. — a (5) H
Baxter, E. W. — a I
Castigli (Pitotti), Mrs. M. — b J
Dent, J. N. — b J
Fankhauser, G. — d J
Kiortsis, V. — c J
Nonaka, T. — a J
Niizima, M. — a J
O'Steen, W. K. — b J
Stuchly, Z. — a J
Urbani, E. — a J
Yanagisawa, T. — a (1) J

b Hormones and metamorphosis

Banarjee, M., Ganguly, D. N., Sarkar, D. N., Banarjee, P., Dev, D. and Bose, B. — a D
Bodenstein, D. — d D
Geigy, R. — a D
Highnam, K. C. — a D
Ichikawa, M. and Nishiitsutsuji (Uwo), Mrs. J. — a D
Novák, V. J. A. — a D
Piepho, H. — a D
Nowakówna, Miss J. — a V
Radecka, Mrs. E. Erdman — a V
Sembrat, K. — c V
Wurmbach, H. — a V
Iwasawa, H. — a I
Iwasawa, H. — a J
Fraser, R. C. — b J
Gawronówna, Miss M. — a J
Kaltenbach, Mrs. J. C. — b, c J
Kollros, J. J. — b, f J
Lynn, W. G. — a J

c Metamorphosis of part of the organism

Löbbecke, E. A. — a D

d Metamorphosis of special organ systems

Integument

Andres, G. — b J
Bagnara, J. T. — a J

Nervous system

Baffoni, G. M. — b J
Konok, I. — a, b (2a/4)D
Nüesch, H. — d D

Special sense organs

Steinitz, H. — c J
Wilt, F. H. — a J
Witschi, E. — e J

Skeleton

Muscular system

Nüesch, H. — b D

Alimentary tract

Respiratory organs

Heart, vascular system and blood

Coelomic cavities and endothelia, lymphatic system and connective tissue

Urogenital system

Giles, E. T. — a D
Aoto, T. — b J
Cambar, R. — c J
Dechambre, Miss C. — b J
Lynn, W. G. — b J

Endocrine glands

Konok, I. — a, b (2a/4)D

VIII. EXPERIMENTAL DEVELOPMENTAL MORPHOLOGY OF PLANTS

Bonner, J. T. — a
Cheney, R. H. — c
Haccius, Miss B. — a, b
Harte, Miss C. — a, b
Jacobs, W. P. — a, b
Jaffe, L. F. — a
Jones, W. E. — a
Liotti, F. S. — a
McLaren, Miss A. — c
Oota, Y. and Takata, K. — a
Osawa, S. — b
Preda, V. — c
Sachs, R. M. — a, b, c

NEW TECHNICAL METHODS
in Developmental Biology
(arranged according to subjects)

This chapter contains data on methods published during the two-year period elapsed between the appearance of the previous and of the present full issue.

CLASSIFICATION OF SUBJECTS

I/II Descriptive and experimental embryology
III Physiology of development
IV Development and genetics
V Development and pathology
VI Regeneration

a microscopy, photography and reconstruction
b histology and cytology
c operation and marking
d culturing (of organisms, organs, tissues and cells)
e physiology
f histochemistry and cytochemistry
g biochemistry
h biophysics

Descriptive and Experimental Embryology

Microscopy, photography and reconstruction

1. Graphic presentation of mitotic activity in development of tissues. *(General)*
Sachs, R. M., C. F. Bretz & A. Lang — Am. J. Bot. **46**, 376-384, 1959

2. Calculation of mitotic and intermitotic rates in epithelial cells of intact animals or of regenerates over considerable periods of time. *(Amphibia)*
Green, E. U., I. O. Coll & N. J. Evans — J. Exp. Zool., 1959

3. Study of living eggs by induced fluorescence with acridine orange.
Austin, C. R. et al. — Exp. Cell Res. (in press)

4. Microangiography of foetal bones. *(Mammalia)*
Brookes, M. — J. Anat. **92**, 261, 1958

5. Microradiography: for investigation of vascular channels in foetal and adult tissues. *(Mammalia)*
Harrison, R. G. — J. Endocrinol. **15**, 64, 1957

Histology and cytology

6. Fixing and staining the egg chromosomes. *(Evertebrata)*
Cather, J. N. — Stain Technol. **33**, 146-147, 1958

7. Neue Methode zur histologischen Bearbeitung kleiner und empfindlicher Organe. *(Evertebrata)*
Konok, I. — Annal. Biol. Tihany **24**, 49-50, 1957

8. Insect embryo chromosome techniques. *(Insecta)*
Borstel, R. C. von & D. L. Lindsley — Stain Technol. 34, 23-26, 1959

See also entry no. 2

Operation and marking

9. Tissue disaggregation and reaggregation. *(General)*
Auerbach, R. & C. Grobstein — Exp. Cell Res. **15**, 384-397, 1958

10. Preparation of tungsten micro-needles for use in embryological research.
Dossel, W. E. — Lab. Invest. **7**, 42, 171-173, 1958 *(General)*

11. Method for sewing under microscopic conditions. *(General)*
Kroeger, H. — Roux' Arch. **151**, 113-135, 1959

12. A technique facilitating the application of regular rows of vital stain marks on eggs. *(Amphibia)*
Shah, R. V. — Experientia, 1959 (in press)

13. A mutation providing a nuclear marker for transplantation of nuclei and tissues. *Xenopus laevis (Anura)*
Elsdale, T. R., M. Fischberg & S. Smith — Exp. Cell Res. **14**, 642-643, 1958

14. A method for castration of embryos. *(Aves)*
Groenendijk-Huijbers, M. M. — Acta Morphol. Neerl.-Scand. **1**, 241-245, 1957

15. Transplantation by myeloschizis method. *(Aves)*
Menkes, B. — Cercetări de embriologie experimentală, **2** (Book)

16. A modified chorioallantoic grafting procedure. *(Aves)*
Zwilling, E. — Transpl. Bull. **6**, 116-117, 1959

17. Intra-uterine operation; section of the sciatic nerve in foetuses.
Zelená, J. — J. Embryol. exp. Morphol. **5**, 283-292, 1957 *(Mammalia)*

Culturing (of organisms, organs, tissues and cells)

18. Reproducible culture of all stages of life cycle. *Didymium nigripes (Eumycetozoina)*
Kerr, N. S. & M. Sussman — J. Gen. Microbiol. **19**, 173-177, 1958

19. Ein einfacher Brutapparat für die Eier von Wasserlungenschnecken. *(Pulmonata basommatophora, Gastropoda)*
Horstmann, H. J. — Zool. Anz. **158**, 129-130, 1957

20. Kulturmethode. *(Bryozoa ectoprocta)*
Schneider, D. — Biol. Z. bl. **78**, 250-283, 1959

21. Culture of cellular components of thymus. *(Vertebrata)*
Papp, E. & W. G. Venzke — Zentr. bl. f. Veter. med. **4**, 291-304,1958

22. A culture medium and method for embryonic cells in vitro. *(Amphibia)*
Barth, L. G. & L. J. Barth — J. Embryol. exp. Morphol., 1959

23. A simple method for embryo and organ culture. *(Amniota)*
Vakaet, L. & J. Pintelon — C. R. Soc. Biol., 1959

24. In vitro culture of early embryos, followed by transfer to uterine foster-mother for subsequent development. *(Mammalia)*
McLaren, A. & J. D. Biggers — Nature **182**, 877-878, 1958

See also entry no. 9

Physiology of Development

Microscopy, photography and reconstruction

See entry no. 3

Culturing (of organisms, organs, tissues and cells)

See entry no. 24

Physiology

25. Modified apparatus for measurement of heavy water concentration by falling drop. *(General)*
Zotin, A. I. — Dokl. Akad. Nauk S.S.S.R. **121**, 5, 948-951, 1958

26. A method for the incorporation of radioactive isotopes in the egg.
Nakano, E. & A. Monroy — Experientia, **13**, 416, 1957 *(Echinoidea)*

27. Gastrular arrest by oxygen at atmospheric pressures. *(Amphibia)*
Malamed, S. — Exp. Cell Res. **13**, 391-394, 1957

28. Wachstumsbeeinflussung. *(Aves)*
Tisna-Amidjaja, D. A. — Roux' Arch. **150**, 655-688, 1958

Histochemistry and cytochemistry

29. Histochemical detection of unsaturated fatty acids. *(Annelida, Gastropoda, Amphibia)*
Hess, O. — Exp. Cell Res. **16**, 452-455, 1959

30. Localization of β. glucuronidase. *(Aves)*
Billett, F. & L. Mulherkar — J. Embryol. exp. Morphol. **6**, 52-56, 1958

See also entries no. 3, 8

Biochemistry

31. Detection of collagen in embryos in microgram amounts. *(Amphibia)*
Edds, M. V., Jr. — Proc. Nat. Acad. Sci. **44**, 296-305, 1958

See also entry no. 26

Biophysics

32. A magnetic method for measuring the forces which the neural folds can exert towards closure. *(Amphibia)*
Selman, G. G. — J. Embryol. exp. Morphol. **6**, 448-456, 1958

33. Intrauterine irradiation as a tool of including immunological tolerance.
Lengerová, A. — Folia Biol. **3**, 321 and 333, 1957 *(Mammalia)*

See also entry no. 27

Development and Genetics

Histology and cytology

34. Chromosome analyses of normal and malignant cells. *(Mammalia)*
Makino, S. & M. Sasaki — Jour. Nat. Cancer Inst. **20**, 3, 465-487, 1958

See also entry no. 8

Operation and marking

See entry no. 13

Culturing (of organisms, organs, tissues and cells)

See entries no. 18, 34

Histochemistry and cytochemistry

See entry no. 8

Biophysics

35. An ultra-violet light method for producing haploids. *(Amphibia)*
Selman, G. G. — J. Embryol. exp. Morphol. **6**, 634-637, 1958

36. Production of auto- and allotetraploids and diploid-tetraploid mosaics by a shock of supersonic waves. *(Urodela)*
Kawamura, T. & Y. Utsunomiya — J. Sci. Hiroshima Univ. **17**, 1-12, 1957

Development and Pathology

Histology and cytology

See entry no. 34

Culturing (of organisms, organs, tissues and cells)

See entry no. 34

Physiology

37. Causation of various malformations by injection of ethyl-urethan during pregnancy. *(Mammalia)*
Nishimura, H. & M. Kuginuki — Fol. Anat. Jap. **31**, 1-10, 1958

Regeneration

Operation and marking

38. Mass induction of regeneration by shedding of the peristome in salt solutions. *(Ciliata)*
Tartar, V. — Exp. Cell Res. **13**, 311-332, 1957

39. A new method of anesthesia. *(Plathelminthes)*
Manner, H. W. — Turtox News **35**, 134, 1957

See also entry no. 13

Culturing (of organisms, organs, tissues and cells)

See entry no. 20

Physiology

40. A method for constantly circulating fluids through the coenosarc during regeneration. (Stalked *Coelenterata)*
Miller, J. A. Jr. — Proc. Soc. Exper. Biol. & Med. **100**, 186-189, 1959

Histochemistry and cytochemistry

See entry no. 29

„SUPPLY AND DEMAND" SERVICE

for Laboratory Animals

Transactions should be carried out directly between the interested parties. We do not take any responsibility either for the transactions themselves, or in matters relating to prices, in- and export regulations, animal protection regulations etc.

With each new list all previous lists become invalid.

A. LIST OF SPECIES AVAILABLE

with numbers referring to List B.

Unless otherwise indicated, most items available throughout the year.

GENERAL	
Australian spp.	20[1])
Marine animals (Gulf of Napels)	32
Marine animals (Japan Sea)	16
PROTISTA	
Amoeba proteus	24[2])
Didymium nigripes	4[3])
Paramaecium spec.	24[2])
Stentor spec.	10[4])
VERMES	
Dugesia gonocephala	15[5])
Enchytraeus albidus	24[2])
Euplanaria polychroa (clone)	22
Haemopus grandis	9
Lumbricus terrestris	9
Macrobdella decora	9
Planaria vitta (clone)	22
ARTHROPODA	
Crustacea	
Cambarus spec.	9
Arachnoidea	
Argiope spec.	9
Latrodectus spec.	9
Tarantula spec.	9
Myriopoda	
Julus spec.	9
Scolopendra spec.	9
Spirobolus spec.	9
Insecta	
Aedes aegypti	40
Anasa spec.	9
Anopheles gambiae	40
Anopheles maculipennis	40
Anopheles stephensi	40
Antheraea pernyi	29[6])
Blatella germanica	24[2])
Bombyx mori (eggs)	18
Bombyx mori	29[6])
Cecropia spec. (cocoons)	9
Celerio euphorbiae	29[6])
Cynthia spec. (cocoons)	9
Dixippus morosus	29[6])
Drosophila (several spp.)	31
Ephestia kühniella (mutant strains)	2
Ephestia kühniella (normal and mutants)	26
Formicidae	9
Habrobracon juglandis (stock no. 33)	7
Lethocerus spec.	9
Musca domestica (NAIDM species, May-Dec.)	5

---

[1]) on special request
[2]) in exchange for Clavelina lepadiformis
[3]) in exchange for other Eumycetozoina in lab. culture
[4]) in exchange for other spp. or races of Stentor
[5]) in exchange for some species from Europe, sexual and asexual animals, fixed
[6]) in exchange for Platysamia cecropia, Chameleon spp.

Melanoplus d. differentialis 3
Melanoplus spec. 9
Odonata 9
Oncopeltus fasciatus 6, 38
Ornithodorus moubata 40
Periplaneta americana 26, 29[6])
Phyllophaga spec. 9
Pieris rapae 9
Polyphemus spec. (cocoons) 9
Ranatra 9
Reduviidae (various spp.) 40
Tenebrio molitor 24[2]), 29[6])
Zaprionus ghesquierei 38
Zaprionus vittiger 38
Xenopsylla cheopis 40

MOLLUSCA

Mollusca (brackish water forms) 30[7])
Anodonta spec. 9
Campeloma spec. 9
Goniobasis spec. 9
Helix pomatia 29[6])
Limax spec. 9
Lymnaea palustris (photoperiodic, breeds on long days) 2
Physa spec. 9
Planorbis spec. 9
Pomatias elegans 29[6])
Watasenia scintillans (♀ ♀ with ripe eggs, May-July) 19

PISCES

Poeciliidae 15[8])
Teleostei (deep-sea forms) 30[7])

AMPHIBIA

Urodela

Ambystoma mexicanum 29[6])
Ambystoma mexicanum (immature) 39
Ambystoma punctatum (eggs, Apr.-May) 8[9])
Ambystoma tigrinum 9
Amphiuma spec. 9
Hynobius retardatus (eggs, Apr.-May) 17
Necturus maculosus 9
Pleurodeles waltlii 28[10]), 29[6])
Triturus cristatus 37
Triturus cristatus Danubialis 28[10]), 29[6])
Triturus italicus 37
Triturus pyrrhogaster 12[11]), 14[12])
Triturus pyrrhogaster (Dec.-Apr.) 13[13])
Triturus torosus 9
Triturus viridescens 9
Triturus vulgaris 28[10]),29[6]), 37

Anura

Acris gryllus 9
Bombina bombina 28[10])
Bombina variegata 28[10])
Bufo americanus 9
Bufo bufo (March-Apr.) 23[14])
Bufo bufo 35
Bufo marinus 9
Bufo regularis 1[15])
Bufo terrestris 9
Bufo viridis 35
Bufo vulg. formosus 14[12])
Discoglossus pictus (Jan.-June) 33
Discoglossus pictus (March-June, Nov.-Dec.) 34[15])
Hyla arborea 28[10])
Hyla cinerea 9
Hyla crucifer 9
Phrynosoma spec. 9
Rana catesbiana 9, 14[12])
Rana clamitans 9

---

2) in exchange for Clavelina lepadiformis
6) in exchange for Platysamia cecropia, Chameleon spp.
7) in exchange for Mytilus edulis
8) in exchange for other Poeciliidae
9) for sale or in exchange for American A, tigrinum eggs
10) in exchange for Xenopus laevis, Anolis carolinensis
11) in exchange for Triturus c. cristatus, Tr. vulgaris
12) in exchange for Triturus viridescens, Xenopus laevis, Hyla regilla, Rana pipiens
13) in exchange for Fundulus eggs
14) in exchange for Hyla (fixed stages)
15) in exchange for Ambystoma mexicanum

Rana dalmatina (March-Apr.)	23[14])
Rana dalmatina	28[10])
Rana esculenta	28[10]),35
Rana palustris	9
Rana pipiens	9
Rana pipiens sphenocephala	9
Rana sylvatica	9
Scaphiopus Holbrookii	9
Xenopus laevis	27[15])

REPTILIA

Chelonia

Amyda ferox	9
Chelydra spec.	9
Chrysemys picta	9
Clemmys spp.	9
Emydinae (Apr.-Nov.)	36[16])
Emys spec.	9
Emys orbicularis	28[10])
Emys orbicularis (May-August)	29[6])
Graptemys spec.	9
Kinosternon spec.	9
Macrochelys spec.	9
Malaclemys terrestris	9
Pseudemys elegans	9
Sternotherus spec.	9
Terrapene spp.	9
Testudinae (Apr.-Nov.)	36[16])

Crocodilia

Alligator mississipiensis	9
Caiman spec.	9

Lacertilia

Anolis carolinensis	9
Lacerta muralis	28[10])
Lacerta muralis (May-August)	29[6])
Lacerta taurica (May-August)	29[6])
Lacerta viridis	28[10])
Lacerta viridis (May-August)	29[6])
Sceloporus spp.	9

Ophidia

Natrix tesselata (May-August)	29[6])
Thamnophis spec.	9

The supply of *Aves* and *Mammalia* is covered by the "International Committee on Laboratory Animals" (Hon. Executive Secr.: Dr. W. Lane-Petter, Laboratory Animals Centre, M.R.C. Laboratories, Woodmansterne Road, Carshalton, Surrey, England).

---

[6]) in exchange for Platysamia cecropia, Chameleon spp.
[10]) in exchange for Xenopus laevis, Anolis carolinensis
[14]) in exchange for Hyla (fixed stages)
[15]) in exchange for Ambystoma mexicanum
[16]) in exchange for Ambystoma spp.

B. LIST OF NAMES AND ADDRESSES

(geographical order)

AFRICA

Egypt

1. DEPT. OF ANATOMY, Fac. of Med., ALEXANDRIA

N. AMERICA

United States

2. DEPT. OF BIOLOGY, Wesleyan Univ., MIDDLETOWN, Conn.
3. ARGONNE NATIONAL LAB., P.O.Box 299, LEMONT, Ill.

4. DEPT. OF ZOOLOGY, Univ. of Minnesota, MINNEAPOLIS 14, Minn.
5. BELLEVUE MEDICAL CENTER, New York Univ., 550 First Ave., NEW YORK 16, N.Y.
6. BIOLOGICAL LABORATORY, Fordham Univ., NEW YORK 58, N.Y., U.S.A.
7. BIOLOGY DEPT., Southwestern at Memphis, MEMPHIS 12, Tenn.
8. DEPT. OF ANATOMY, Univ. of Vermont, Coll. of Med., BURLINGTON, Vt.
9.* THE LEMBERGER CO., P.O.Box 482, OSHKOSH, Wis.
10. Dr. Vance TARTAR, University of Washington, NAHCOTTA, Wash.

ASIA

India

11.* VITA LIMITED, 9 Ludlow Castle Road, DELHI

Japan

12. ZOOLOGICAL LAB., Hiroshima University, HIROSHIMA CITY
13. DEPT. OF BIOLOGY, Kumamoto University, KUMAMOTO-SHI
14. INSTITUTE OF ENDOCRINOLOGY, School of Medicine, Gunma University, MAEBASHI
15. BIOLOGICAL LAB., Osaka Liberal Arts University, Ten-noji-ku, OSAKA
16. SADO MARINE BIOLOGICAL STATION, AIKAWA, SADO ISLAND
17. ZOOLOGICAL INSTITUTE, Hokkaido University, SAPPORO
18. DEPT. OF PHYSIOLOGY, Sericultural Exper. Station, Koenji, Suginami-ku, TOKYO
19. BIOLOGICAL INSTITUTE, Fac. of Liberal Arts, Toyama University, Hasumachi 22, TOYAMA

AUSTRALIA

Australia

20. DEPT. OF ZOOLOGY, New England University, ARMIDALE, N.S.W.

EUROPE

Belgium

21.* REPTILAMPHIBIA (Felix Vandevelde), Remerstr., BAAL, Brabant

Denmark

22. INST. FOR ALM. ZOOL., Universitetsparken 3, COPENHAGEN Ø

---

* Biological Supply Houses, Zoological Collectors, etc.

France

23. LAB. DE BIOLOGIE ANIMALE, Fac. des Sci. de Bordeaux, 351 Cours de la Libération, TALENCE (Gironde)

Germany (Eastern)

24. ZOOLOGISCHES INSTITUT der Universität, Stalinplatz, ROSTOCK

Germany (Western)

25. ZOOLOGISCHES INSTITUT, Sophienstr. 6, HEIDELBERG
26. INSTITUT FÜR ENTWICKLUNGSPHYSIOLOGIE, Gyrhofstr. 17, KÖLN-LINDENTHAL
27. ZOOLOGISCHES INSTITUT der Universität, Kerpenerstr. 13, KÖLN-LINDENTHAL

Hungary

28. INSTITUTE OF ANATOMY, University Medical School, Dischka u 5, PÉCS
29. THE BIOLOGICAL RESEARCH INSTITUTE, Hungarian Academy of Science, TIHANY/Lake Balaton

Italy

30. ISTITUTO DI ZOOLOGIA, Università di Messina, MESSINA
31. ISTITUTO DI GENETICA, Università di Milano, Via Celoria 10, MILANO
32.* STAZIONE ZOOLOGICA, Villa Comunale, NAPOLI (101)
33. ISTITUTO DI ANATOMIA COMPARATA, Via Archirafi 22, PALERMO
34. ISTITUTO DI ZOOLOGIA, Via Archirafi 18, PALERMO
35. ISTITUTO BIOLOGIA GENERALE, S. Pietro, PERUGIA
36. ISTITUTO DI ANATOMIA UMANA NORMALE, Università di Pisa, Via Roma 33 PISA
37. ISTITUTO DI ZOOLOGIA E ANATOMIA COMPARATA, Via A. Volta 4, PISA

Netherlands

38. GENETISCH LABORATORIUM der Rijks Universiteit, 5e Binnenvestgracht 8, LEIDEN
39. HUBRECHT LABORATORY, Intern. Embryol. Inst., Janskerkhof 2, UTRECHT

Switzerland

40. SCHWEIZERISCHES TROPENINSTITUT, Socinstr. 57, BASEL

Communications from the Hubrecht Laboratory

I The team work project

Contrary to the information given in the supplement to the seventh issue, the *fourth international team work* will be held in 1960. However, owing to the rapid extension of the staff of the laboratory the accomodation in the present building does not allow the organization of a "normal" team, so that the fourth team will consist of a limited number of invited members only. Among these there will be several scientists whose applications for previous teams could not be realized.

Only a very provisional list of participants can be given at the present time:

Dr. R. Azoubel, Recife, Brazil
Mr. V. Labordus, Utrecht, Holland
Dr. M. Michael, Alexandria, Egypt
Dr. K. Rzehak, Krakow, Poland
Dr. G. Székely, Pécs, Hungary

.....

The team work will be held from January 1st till July 31st under the personal direction of Dr. P. D. Nieuwkoop and with the assistance of the other members of the staff.

The general topic will be: "Experimental studies of basic mechanisms acting in successive phases of vertebrate morphogenesis". It is hoped that the fourth team work will be the last one held in the old building, and that it will be possible to receive the fifth team in the new building, which may be ready in 1962 or 1963. The more or less firmly established tradition of the organization of an international team work every second year will in this way be interfered with as little as possible.

II The building project

The present building not only offers insufficient accommodation for the rapidly expanding staff of the institute and for the increasing number of foreign workers, but it also greatly restricts the development of the research programme itself. Embryology is a science which develops very rapidly; many new methods have been introduced in the last decade, leading to new forms of approach and to new subfields of science.

The new building will therefore provide accommodation for several new fields of research. Besides descriptive and comparative embryology and the already well established field of experimental morphology, which together form the trunk upon which the new branches can be grafted, histo- and cytochemical analysis of development, the method of tissue culture, developmental genetics, developmental physiology and biophysical analysis of developmental processes will receive adequate accommodation, while an additional research unit will be reserved for new, still unknown offshoots.

This programme will lead to a considerable extension of the scientific staff and consequently of the technical staff as well.

First of all tissue culture research will be developed by Mrs. H. Sobel from Jerusalem. With this a beginning will be made while still in the old building. In the coming years the other units will be developed one after the other.

III The Central Embryological Library (C.E.L.)

A *The reprint collection*

The collection at present comprises a total number of about 20 000 titles. Every year nearly 2000 papers are added. Part of these are received on a basis of exchange against publications issued by the Hubrecht Laboratory (see B). The rest are reprints received on request. To this end nearly all titles relating to developmental biology are regulary extracted from a number of important review journals.

B *Reprint exchange*

Until recently the Institutes and research groups appearing on the mailing list of the Hubrecht Laboratory automatically received all publications issued by the Laboratory. In order to secure a more efficient and wider distribution a different system has been adopted. At regular intervals lists of titles of the reprints available are now sent out, and the recipients are requested to check off and return the list. At the same time the mailing list has been extended.

C *Services rendered by the C.E.L.; conditions for borrowing*

1. Every embryologist can ask for information about literature of certain authors, for surveys of literature on certain subjects (according to the classification-system of the G.E.I.S.), for surveys of newly published literature, etc.
2. Every embryologist can borrow reprints which are not available in his own country. Books and Normal tables are usually not lent out, volumes of periodicals are only lent out to investigators in the Netherlands.

   Conditions:

   a. Reprints may be borrowed for 3 months at the utmost (for the Netherlands 1 month), time for shipment not included.
   b. The receipt added to the consignment must be returned by return of post, after having been controlled and signed.
   c. In case of high forwarding charges these have to be partly carried by the applicant.
3. Every embryologist can personally consult the C.E.L. at all times.
4. The C.E.L. will be at the disposal of every embryologist working at the Hubrecht Laboratory.

IV The Central Embryological Collection of slides and material

A *Concise Catalogue*

Copies of the "Concise Catalogue" of the Collection, which was issued in 1953, are still available on request.

B *Conditions for borrowing*

Conditions:

1. Slides, material in paraffin and/or material in alcohol can only be borrowed for one year, after which it has to be returned automatically if no special request for extension of the loan has been made by the investigator and has been approved by the staff of the Hubrecht Laboratory.

2. Material in alcohol or paraffin has to be returned as such or in the form of well prepared slides which have been sectioned, stained and embedded properly, clearly labeled (name of species, thickness and direction of sectioning, method of staining, etc.) and numbered according to given indications.
3. Costs of transport may be charged if these exceed reasonable limits.
4. Two copies of those publications dealing with material from the Central Embryological Collection should be sent to the Central Embryological Library of the Hubrecht Laboratory.
5. If material of the Central Embryological Collection has been used in investigations, it is respectfully requested that this be indicated in the publications concerned.

Restrictions:

6. Very rare or regularly consulted material can only be studied at the Hubrecht Laboratory.
7. Material of great historical value cannot be lent out.
8. If material has not been treated properly or (after special request) has not been returned in time by an investigator, material will no longer be lent out to the person in question.

V Photographic Reproduction Service

The Hubrecht Laboratory makes photostats on request of papers present in the Central Embryological Library or borrowed from elsewhere. The negatives will remain at the Laboratory.

Price list (both text and plates):

Positive microfilm (25 × 36 mm):	p.p. *f* 0.25 = $ 0.07
Enlarged prints	
7 × 10 cm (box camera size):	p.p. *f* 0.40 = $ 0.10
13 × 18 cm (average page size):	p.p. *f* 0.50 = $ 0.13
18 × 24 cm (large page size):	p.p. *f* 0.65 = $ 0.17

Communications of the „Institut International d' Embryologie"

(Embryological Section of the I.U.B.S.)

The next *General Assembly* of the I.I.E. will be held on September 20th, 1960, in Pallanza (on the Lago Maggiore, Northern Italy). New fellows and members will then be elected. Information as to the procedure of election of new members, as well as the latest list of fellows and members, may be found in the seventh full issue, 1957, p. 206—210.

A *Symposium* will be held in Pallanza from September 15th till September 20th, 1960, which period has been chosen in coordination with the already planned activities of the other sections of the I.U.B.S. The Symposium is organized with the help of an Italian organizing Committee under the presidency of prof. S. Ranzi. It will be open to fellows and members of the I.I.E., but non-members may be invited, either by a fellow or member (see list of fellows and members referred to above), or through the Board of the I.I.E. In the latter case an application for invitation may be sent directly to the Adjunct Secretary, Prof. P. D. Nieuwkoop.

Non-members may either present a short paper (20 minutes, including discussion), provided that it falls within the scope of the Symposium, or may take part in a panel discussion of specialists in one of the subjects of the Symposium.

The programme of the Symposium reads as follows:

Reception of the participants on Wednesday evening, Sept. 14.
Scientific programme and general time schedule:

ADVANCES SINCE 1945 IN OUR KNOWLEDGE OF GERM CELLS AND EARLIEST STAGES OF DEVELOPMENT.

Sub-topic A: FORMATION, ULTRASTRUCTURE AND PHYSIOLOGY OF OOCYTES, AS SEEN IN THE LIGHT OF THEIR MORPHOGENETIC SIGNIFICANCE

Subject a) Relations with the maternal organism
chairman: Prof. Chr. P. Raven (Utrecht)
main speaker: Miss B. Mintz (Chicago, Ill.) [1])

Subject b) Progressive changes in structural and biochemical composition
chairman: Prof. C. H. Waddington (Edingburgh)
main speaker: .....

Subject c) Polarity and bilateral symmetry
chairman: Prof. J. Pasteels (Brussels)
main speaker: Prof. Ch. Devillers (Paris)

Evening lecture on "Biochemistry and physiology of sperm"
by Dr. T. Mann (Cambridge)

The opening session of the Symposium, the subjects a, b and c and the first evening lecture will be held on Thursday, Sept. 15. [2])

[1]) The titles of the individual reports will be announced later.
[2]) Each morning session will comprise about 3½ hours and each afternoon session about 2 hours.

Subject d) Nucleo-cytoplasmic relations
chairman: Prof. J. BRACHET (Brussels)
main speaker: Dr W. S. VINCENT (Syracuse, N.Y.)

Sub-topic B: PROGRESSIVE MATURATION OF THE ORGANIZATION PATTERN IN FERTILIZED AND CLEAVING EGGS

Subject e) in Spiralia
chairman: Prof. F. E. LEHMANN (Bern)
main speaker: Dr. R. WEBER (Bern)

Subject f) in Ascidians
chairman: Prof. G. REVERBERI (Palermo)
main speaker: Dr. A. MINGANTI (Palermo)

Evening lecture on "Ultrastructure of sperm and its changes during fertilization" by Dr. A. L. COLWIN (New York)

The subjects d, e and f and the second evening lecture will be held on Friday, Sept. 16.

Subject g) in Arthropodes
chairman: .....
main speaker: Prof. G. KRAUSE (Würzburg)

Subject h) in Echinoderms
chairman: Prof. J. A. M. RUNNSTRÖM (Stockholm)
main speaker: Dr. A. LALLIER (Paris)

Subject i) Development of symmetry in Vertebrates
chairman: Prof. Et. WOLFF (Paris)
main speaker: Dr. J. CLAVERT (Strasbourg)

Demonstration of films in the evening.

The subjects g, h and i and the presentation of films will be held on Saturday, Sept. 17.

Free papers on subjects which fall within the scope of this Symposium will be given on Sunday morning, Sept. 18.

Subject j) Role of the nucleus
chairman: Prof. E. HADORN (Zürich)
main speaker: Dr. R. W. BRIGGS (Bloomington, Ind.)

Subject k) Topegenesis and topochemistry
chairman: Prof. A. MONROY (Palermo)
main speaker: Prof. E. URBANI (Camerino)

Subject l) Early development of special proteins
chairman: Dr. J. D. EBERT (Baltimore, Md.)
main speaker: Dr. G. W. NACE (Ann Arbor, Mich.)

The subjects j, k and l will be discussed on Monday, Sept. 19.

Subject m) in Mammalia
chairman: Prof. F. W. R. Brambell (Bangor)
main speaker: .....

The subject m will be discussed on Tuesday morning, Sept. 20.

Tuesday afternoon is reserved for free papers which fall outside the scope of this Symposium. This session will be open to fellows and members only.

Tuesday evening may be devoted to a general discussion on the comparative embryological aspects of the topic of the Symposium, chairman: Prof. A. Dalcq (Brussels).

The Adjunct Secretary-treasurer, P. D. NIEUWKOOP

Announcements of recently published books on development and related subjects

Group A (books for instruction):

BLACHER, L. J., 1955 — "Istoria embriologii v Rossii" (A history of Russian embryology)

GALLIEN, L., 1958 — "Problèmes et concepts de l'embryologie expérimentale"

GROSSER, O., 1959 — "Grundriss der Entwicklungsgeschichte des Menschen" (5th revised edition)

MONTAGNA, W., 1959 — "Comparative anatomy"

NALBANDOV, A. V., 1958 — "Reproductive physiology"

RAVEN, Chr. P., 1959 — "An outline of developmental physiology" (2nd revised edition)

Group B (books for investigators):

BAYLE, H., GOUYGOU, C. and GUILLON, G. (organizers of the colloquium), 1958 — "La fonction spermatogénétique du testicule humain"

BONNER, J. T., 1959 — "The cellular slime molds"

BRACHET, J., 1958 — "Biochemical cytology" (2nd printing)

BRACHET, J. and MIRSKY, A. E. (editors), 1959 — "The cell; biochemistry, physiology, morphology" (Vol. I)

BREMER, J. L., 1957 — "Congenital anomalies of the viscera; their embryological basis"

COLE, H. H. and CUPPS, P. T. (editors), 1959 — "Reproduction in domestic animals" (Vol. I)

DEJEAN, Ch., LEPLAT, G. and HERVOUËT, Fr., 1958 — "L'embryologie de l'oeil et sa tératologie"

ECKSTEIN, P. (editor), 1959 — "Implantation of ova"

GOODRICH, E. S., 1959 — "Studies on the structure and development of Vertebrates"

GORDON, M. (editor), 1959 — "Pigment cell biology"

GRIGNON, G., 1957 — "Développement du complexe hypothalamo-hypophysaire chez l'embryon de poulet"

GUTTENBERG, H. von, 1957 — "Embryologische und histogenetische Untersuchungen an Monokotyledonen"

KRABBE, Kn. H., 1959 — "Studies on the morphogenesis of the brain in some Amphibia, Ascaphus, Rana, Nectophrynoides" (Morphogenesis of the Vertebrate brain VII)

LANMAN, J. T. (editor), 1958 — "Physiology of prematurity"

MAZANEC, K., 1959 — "Blastogenese des Menschen"

McELROY, W. D. and GLASS, B. (editors), 1958 — "A symposium on the chemical basis of development"

MENKES, B., 1958 — "Recherches d'embryologie expérimentale" (Vol. I)

PETER, K., 1957 — "Funktionelle Embryologie der Wirbeltiere (Der lebende Keimling)"

PFLUGFELDER, O., 1958 — "Entwicklungsphysiologie der Insekten" (2nd edition)

RUDNICK, D. (editor), 1959 — "Developmental cytology"

RUDNICK, D. (editor), 1959 — "Cell, organism and milieu"

TOKIN, B. P., 1959 — „Regeneracija i somatičeskij embriogenez" (Regeneration and somatic embryogenesis)

TÖNDURY, G., 1958 — "Entwicklungsgeschichte und Fehlbildungen der Wirbelsäule"

VAZART, B., 1958 — "Différenciation des cellules sexuelles et fécondation chez les Phanérogames"

VILLEE, C. A. (editor), 1958 — "Gestation"

VINNIKOV, Ja. A. and TITOVA, L. K., 1957 — "Morfologija organa obonjanija" (Morphology of the olfactory organ)

WEISS, P. (organizer), 1958/1959 — "Reports from the developmental biology conference series, 1956" (10 Vols.)

Conference report, 1956 — "Problemy sovremennoj embriologii" (Problems of contemporary embryology)

"ISTORIA EMBRIOLOGII V ROSSII"
(A history of Rusian Embryology)
1955

by L. J. Blacher
375 pp., 48 figs.
and several portraits

Izdatelstvo Akademii Nauk SSSR
Moscow

We only announce this book, which is written in Russian, by title. The author is Head of the Department for the History of Biology, Institute for the History of Natural Sciences and Technique, Academy of Sciences of the U.S.S.R.

"PROBLEMES ET CONCEPTS DE L'EMBRYOLOGIE EXPERIMENTALE"
1958

by L. Gallien
(l'Avenir de la science, N.S., N.4)
586 pp., 221 figs.

Gallimard, Paris
Price: Fr. 2500

The author of this book has aimed at filling up a gap existing in the biological literature written in the French language. He has designed his book particularly for the use of advanced biology students, and has devoted particular care to didactic aspects.

Owing to size limitations some aspects of the subject had to be eliminated or treated very briefly. This holds for gametogenesis, larval development and regeneration, as well as for biochemical aspects.

The author has not tried to be exhaustive in his treatment of the various topics. He rather gives details only of such typical experiments as are best suited to illustrate particular principles.

The book contains 17 chapters. The first two are introductory, and among other things contain a short survey of experimental techniques. The following two chapters describe the organization of the egg cell, and the development of seven fundamental egg types. Then follow five chapters dealing with the concepts of preformation (mosaic development), regulation, determination, field and gradient, with examples from many animal groups, but principally from echinoderm and amphibian development.

The next five chapters deal with the problem of induction. The discussion starts with the organizer concept, and continues with regional factors in induction, the nature of the induction process, induction phenomena in various vertebrates and invertebrates, and finally the role of induction in organogenesis.

The last three chapters of the book are devoted to nuclear activities in development, and to the problems of sex development.

The manuscript of the book was finished in 1956. Consequently the most recent advances are not included.

The bibliography comprises 32 pages. There are author and subject indexes.

It is a pity that, owing to the poor quality of the paper, several of the more finely detailed figures have become blurred very badly. The binding of the book is unfortunately also very poor.

"GRUNDRISS DER ENTWICKLUNGSGESCHICHTE DES MENSCHEN"

5th revised edition, 1959

by O. Grosser †
(revised by R. Ortmann)
176 pp., 200 figs.

Springer-Verlag
Berlin, Göttingen, Heidelberg
Price: D.M. 19.80

The fourth edition of this book, revised by G. Politzer, appeared in 1953. The present edition has retained about the same size, but the illustrative material, the most outstanding feature of the book, has been extended. The subdivision of the subject matter according to germ layers has been abandoned. Some chapters had to be brought up to date, and results obtained with new techniques have been included in appropriate places.

"COMPARATIVE ANATOMY"

1959

by W. Montagna
397 pp., 233 figs.

John Wiley & Sons, Inc.
New York
Price: $ 6.00

The author of this book has spent much care on making the subject matter presented attractive for the reader. One of his means has been to lay more stress than usual on the functional aspects of the various organ systems.

More interest and insight is also secured by emphasizing developmental events. An introductory chapter of 20 pages deals with the development of the vertebrate body plan. Moreover most chapters contain rather long sections on the embryonic development of the organ system concerned.

Another very attractive feature of the book is its lay-out and the illustrative material used. The numerous line drawings are beautifully excecuted and of exceptional clarity. The photographical illustrations have been carefully selected and in many instances provide a very welcome link with the living organism. The printing is very clear.

Each chapter ends with a comprehensive summary and a short list of suggested reading. The book is concluded by an anatomical glosary and an alphabetical index.

"REPRODUCTIVE PHYSIOLOGY, Comparative Reproductive Physiology of Domestic Animals, Laboratory Animals and Man"

1958

by A. V. Nalbandov
271 pp., 38 figs., 56 tbs.

W. H. Freeman and Company
San Francisco
Price: $ 6.75

The present book follows the comparative approach. It has grown from a lecture course given to students of various different disciplines, and is apparently meant for the use of graduate students. It is based on data of birds and mammals, including man.

It seems of no use to enumerate the various chapters. It may be sufficient to state the following. The histology, embryology and anatomy of the reproductive systems are treated concisely. The main stress in the work is on the role of the endocrine glands and the mode of action of hormones. Short chapters are devoted to the germ cells and to fertilization (12 pages), to early developmental stages and processes (12 pages), and to ovulation and fertilization rates and embryonic mortality (13 pages). A concluding chapter discusses fertility and sterility.

The number of references given is restricted, and so is the number of illustrations. There is a good subject index.

"AN OUTLINE OF DEVELOPMENTAL PHYSIOLOGY"

2nd revised edition, 1959

by Chr. P. Raven
224 pp., 64 figs., 10 pls.

Pergamon Press
London, New York, Paris, Los Angeles
Price: 25 s.

This book has already become widely known since its first English edition appeared in 1954. It was originally written for non-biologists, but has also proved to be of value for undergraduate biology students, because of its didactic qualities.

The second English edition has been enlarged by the incorporation of new results. The list of references has been extended by several important recent papers.

* * *

"LA FONCTION SPERMATOGENETIQUE DU TESTICULE HUMAIN"

1958

Colloquium organized by
H. Bayle, C. Gouygou and G. Guillon
416 pp., 137 figs., 6 pls.

Masson et Cie
Paris

This book is a collection of the papers given at a colloquium held in Paris in 1958. For the embryologist mainly the first ten papers (143 pages) are of

interest. These deal with anatomy and embryology of the human testis, normal spermatogenesis, ultrastructure of sperm, and normal physiology of spermatogenesis (vascular, nervous, hormonal and genetical factors). The rest of the book is almost exclusively of medical interest.

Most papers are followed by short lists of references. The book lacks an alphabetical index.

"THE CELLULAR SLIME MOLDS"

1959

by J. T. Bonner — Princeton Univ. Press

149 pp., 13 figs. and 8 pls. — Price: $ 4.00

In this book a comprehensive survey is given of descriptive and experimental work carried out up till now on the organisms belonging to the group of the Acrasiales. These interesting organisms are more and more considered to be particularly useful in the study of development, and it is especially from this point of view that the author summarizes the work, and tries to give an interpretation of the facts.

In the first chapter a short description is given of those primitive colonial organisms which are often unjustly associated with the Acrasiales, and a few points concerning the significance of aggregation in biology are discussed. The second chapter examines the nature of the various members of the Acrasiales and the mechanics of their development. The third chapter deals with the various morphogenetic movements occurring during the aggregation, migration and culmination phases.

Finally a chapter devoted to the problem of differentiation summarizes a number of recent investigations pointing to the importance of cell-variation for differentiation in these organisms.

The book is concluded by an extensive bibliography.

"BIOCHEMICAL CYTOLOGY"

2nd printing, 1958

by J. Brachet — Academic Press

535 pp., 190 figs. — New York and London

Price: $ 8.80

The first printing of this book appeared more than two years ago, but was not announced in this journal. Now that a second printing has seen the light, it seems justified to make up for this omission.

The book has grown from lectures. Its principal aim is to provide a link between the more or less separate disciplines of cytology, biochemistry and genetics in the form of a handbook. The author himself warns the reader to regard the contents of his book with caution, since it deals with recent rather than well-established facts and ideas. On the other hand, the name of the author warrants the most up-to-date treatment of the subject matter.

The chapter which is of most interest to embryologists is the one dealing with "the nucleus and the cytoplasm in embryonic differentiation" (82 pages). It is preceded by chapters on the cytoplasm and nucleus of the resting cell, on mitosis, nucleic acids in heredity and protein synthesis, and nucleocytoplasmic interactions in unicellular organisms. The book is opened by brief historical and technical surveys, and closed by a short chapter on cancer cells, and a

few final remarks, mainly concerning the meaning of such notions as "life" and "living".

Literature references are given at the end of each chapter. The book further contains a subject and an author index. It is illustrated mainly with photomicrographs and graphs.

"THE CELL, Biochemistry, Physiology, Morphology" Vol. I, 1959

Editors: J. Brachet and A. E. Mirsky
816 pp., 124 figs.

Academic Press
New York and London
Price: $ 22.—

The present book is the first of three volumes. Together they will form one of the increasingly common collaborative treatises, written by a large group of co-authors. The number of contributors to volume I is twenty. Twelve of these are from the U.S.A.

Volume I consists of two parts. The first part deals with cytological, cytochemical and related methods. The last of its eight chapters discusses cellular autonomy and cellular interrelations as studied by "tissue culture" techniques. The second part, entitled "Problems of cell biology", consists of fifteen chapters, which are nearly all of direct interest to embryologists. Among the subjects are: fertilization, sex determination, differentiation, nucleo-cytoplasmic interactions, and the acquisition of biological specificity.

Each author has organised his chapter in his own way. In some chapters summaries are given at the end of each section; others have a general summary, or a more or less theoretical concluding section. Each chapter is preceded by a detailed table of contents, and followed by a list of references. Illustrations have been used sparingly; some chapters are not illustrated at all. The book is concluded by an author index and a very detailed subject index.

Volumes II and III of the book will deal respectively with cell constituents, mitosis, meiosis, and specialized cells.

"CONGENITAL ANOMALIES OF THE VISCERA, Their embryological basis" 1957

by J. L. Bremer
202 pp., 89 figs.

Harvard Univ. Press
Cambridge, Mass.
Price: $ 5.00

This book is meant particularly for the use of pediatricians, pathologists and surgeons, who in the existing text books will often search in vain for data regarding the embryology of certain malformations.

In 11 chapters the most commonly encountered abnormalities of the viscera are discussed. The sequence is topographical rather than strictly systematical, which facilitates the clinical use of the book. In each chapter the discussion of developmental abnormalities grows logically from a simple, but clear description of the normal developmental events. The nervous system is not taken into account. Four chapters have been allotted to the heart and the great vessels.

Among the illustrations a large place has been given to simple diagrams. Lists of references are provided for each chapter, and the book is concluded by a subject index.

"REPRODUCTION IN DOMESTIC ANIMALS"

1959

Editors: H. H. Cole and P. T. Cupps
1102 pp., 200 figs.

Academic Press
New York and London
Price: $ 27.50

The present book is a collaborative treatise written by nearly thirty co-authors. It consists of two volumes.

Volume I deals only with mammals. Chapters of special interest to embryologists are those on fertilization and egg development (31 pages), and on implantation and fetal development (33 pages). The former is based mainly on research in rodents, while in the latter the subject matter is treated separately for the Artiodactyla, the Perissodactyla and the Carnivora respectively. The other chapters of Volume I deal with development and anatomy of reproductive organs, sex differentiation, endocrine mechanisms, estrous cycles of the cow, mare, ewe, doe, sow and dog, and with gestation and lactation.

Volume II deals with spermatogenesis, physiology of semen, artificial insemination, nutrition and other environmental factors in reproduction, fertility, and finally with reproduction in the fowl.

The work is beautifully illustrated. Lists of references follow each chapter. Both volumes are concluded by author and subject indexes.

"L'EMBRYOLOGIE DE L'OEIL ET SA TERATOLOGIE"

1958

by Ch. Dejean, G. Leplat and Fr. Hervouët
728 pp., 534 figs, 10 coloured pls.

Masson et Cie
Paris
Price: fr. 8.000

This book has been written at the request of the Société Française d'Ophtalmologie, and is meant primarily for the use of ophtalmologists. It is concerned for the far greater part with the human eye.

The work has been divided between three authors, one of whom is a Belgian. Attempts at unification of the three contributions had to be omitted for practical reasons, so that double treatment of some points could not be avoided.

The book is opened by two chapters treating the earliest stages of eye development, and the developmental mechanics of the eye. Then follows the main portion of the book, the description of the normal development of the eye and its associated structures. This is immediately followed by a short chapter in the form of a normal table, summarizing the main events according to approximate age and length of the embryo. The last chapter extensively treats the teratology of the eye.

The book is profusely illustrated, mainly with photomicrographs. An extensive bibliography follows each chapter, and an alphabetical index concludes the book.

"IMPLANTATION OF OVA"

1959

Editor: P. Eckstein
(Memoirs of the Society for Endocrinology, no. 6)
97 pp., 6 pls., several figs. and tabs.

Cambridge Univ. Press
London
Price: 30 s.

This is a report of a symposium held in London in 1957. It had 18 participants, most of them from England. The report consists of ten papers, each

followed by a bibliography and a group discussion. Much of the research reported on was not published previously. The papers cover morphological, biochemical, endocrinological and pharmacological aspects of ovum implantation in various mammals. The book contains a number of excellent photographical illustrations.

"STUDIES ON THE STRUCTURE AND DEVELOPMENT OF VERTEBRATES"
Vol. I and II
1959

by E. S. Goodrich
total 906 pp., 754 figs.
(paper bound)

Dover Publ. Inc.
New York
Price: 2 vol. $ 5.—

These two volumes constitute an unaltered reprinting of the original edition of 1930, to which has been added an obituary of the author by A. C. Hardy. Volume I contains the chapters on "hard", volume II those on "soft anatomy".

The size of the volumes is handy. Notwithstanding the relatively low price, the quality of the paper is good, and the binding firm. The figures are mostly well reproduced.

"PIGMENT CELL BIOLOGY"
1959

Editor: M. Gordon
(Proceedings of the Fourth Conference on the Biology of Normal and Atypical Pigment Cell Growth)
647 pp., 332 figs.

Acad. Press Inc.
New York
Price: $ 13.50

This conference report consists of 34 papers. At least five of these are of direct embryological significance, but embryologists working on pigment cell formation may want to read many of the other papers, e.g. those on endocrinology of pigment formation, and on tissue culture, centrifugation, irradiation, histochemistry, growth, metabolism, enzyme activity and electron microscopy of pigment cells.

"DEVELOPPEMENT DU COMPLEXE HYPOTHALAMO-HYPOPHYSAIRE CHEZ L'EMBRYON DE POULET"
1957

by G. Grignon
286 pp., 27 pls.

Soc. d'Impressions
Typographiques
Nancy

This monograph is the report of very thorough study on the development, morphology and histo-physiology of the hypothalamic-hypophyseal complex in the chick, carried out with histological and histochemical methods.

The work is divided into five parts. The first part deals with the organogenesis and cytogenesis of the pituitary gland. The second part describes the organogenesis and histogenesis of the neurohypophysis and neighbouring structures. The third part is devoted especially to the development of the vascularization of the hypophysis. The last two parts deal with the development of neuro-secretory activity respectively in the hypothalamo-hypophyseal complex, and in the ependyma of the 3rd ventricle, particularly in its specific-

ally differentiated parts, the sub-commissural, the paraventricular and the subfornical organs.

The work is illustrated with more than 130 photomicrographs. The bibliography comprises 38 pages.

"EMBRYOLOGISCHE UND HISTOLOGISCHE UNTERSUCHUNGEN AN MONOKOTYLEDONEN"

1957

by H. von Guttenberg
(Botanische Studien, Heft 7)
161 pp., 154 textfigs., 10 pls.

VEB Gustav Fischer Verlag
Jena
Price: D.M. 16.40

This monograph brings together a number of separate investigations on the development of monocotyledonous plants. The problems underlying these investigations are of a comparative-morphological nature. The studies are carried beyond germination, and special attention is paid to root formation.

"STUDIES ON THE MORPHOGENESIS OF THE BRAIN IN SOME AMPHIBIA, ASCAPHUS, RANA, NECTOPHRYNOIDES"

1959

by Kn. H. Brabbe
(Morphogenesis of the Vertebrate brain, VII)
63 pp., 19 pls.

Ejnar Munksgaard
Copenhagen
Price: D.Kr. 35.—

This monograph is the seventh in a series of studies by the same author started in 1939. The work is purely descriptive. It deals with three Anuran forms, and has very fine plates.

"PHYSIOLOGY OF PREMATURITY"

1958

Editor: J. T. Lanman
Transactions of the second Conference, 1957)
160 pp., 62 figs., 23 tbs.

Josiah Macy, Jr. Foundation
New York
Price: $ 3.75

This report is a sequel to the one announced in the supplement to the seventh issue (p. 22). It contains group discussions about aerobic and anaerobic metabolism in the fetus, and about breathing in premature infants.

"BLASTOGENESE DES MENSCHEN"

1959

by K. Mazanec
179 pp., 118 figs.

VEB Gustav Fischer Verlag
Jena
Price: D.M. 20.60

This monograph is an extended translation of the original Czech edition of 1953. It deals with the developmental period from 0 till about 21 days (i.e., until the appearance of the first somites). This developmental period is subdivided into seven epochs, according to Streeter's criteria. The book opens with a brief critical survey of all the embryonic material of this period available up till about 1956. Then follows a continuous description of the developmental processes, based on this material, a short chronological survey, and a summary.

The illustrations are printed on special paper. The greater part of the figures

are drawings (partly graphical reconstructions of approximately median sections), the rest are photomicrographs. The quality of reproduction of the latter is reasonable.

The bibliography contains 228 titles. The book contains author and subject indexes.

"A SYMPOSIUM ON THE CHEMICAL BASIS OF DEVELOPMENT" 1958

Editors: W. D. McElroy and B. Glass
934 pp., more than 272 figs.

The Johns Hopkins Press
Baltimore, Md.
Price: $ 15.—

The present book consists of 42 papers and discussions presented during a symposium held under the sponsorship of the McCollum-Pratt Institute of the Johns Hopkins University.

The subject matter is subdivided into four sections, viz. "developmental cytology" (8 papers), "cellular and tissue interactions in development" (7), "problems of specificity in growth and development" (16), and "control mechanism in development" (11). The book is concluded by a systematic summary of the entire symposium written by one of the editors (68 pages).

The collaborators to this book form a truly international company, including many of the leading authorities in the field of developmental biology.

The scope of many papers is wider than the title of the book suggests, i.e. higher levels of organization than the purely chemical one are amply discussed.

Literature references follow each paper. The book contains an index to names of participants, and an extensive subject index.

"RECHERCHES D'EMBRYOLOGIE EXPERIMENTALE" Vol. I, 1958

by B. Menkes
807 pp., 429 figs.

Edit. Acad. Republ. Populare Romîne

The present book is a collection of reports of investigations carried out by a research group in experimental embryology at the Scientific Research Basis of the Roumanian Academy in Timişoara, Roumania. The book is written in Roumanian, but it contains a summary and a list of explanations of figures in French, comprising 30 pages. This enables the interested reader to form an idea about the character and the theoretical background of these investigations. The latter is formed by the materialistic-dialectic doctrine and the ideas of its scientific exponents.

The investigations have been carried out exclusively on avian embryos. Extensive methodological information is supplied. The principal research objects have been the following: the development of "reactivity" of the embryo and extra-embryonic organs (phagocytosis, hyperplasia, grafting, infection, effects of surgery of the central nervous system); the biology of xenoplastic skin grafts; the function of some embryonic organs (meso- and metanephros; liver and yolk; heart and surrounding mesenchyme); certain developmental correlations (between nutrition and respiration; between embryo and yolk sac; between embryo and area vasculosa; significance of allantoic circulation and sub-embryonic fluid).

"FUNKTIONELLE EMBRYOLOGIE DER WIRBELTIERE (Der lebende Keimling)"

1957

by K. Peter †
(edited by R. Zaunick)
Nova Acta Leopoldina N.F., N. 133, Band 19
128 pp., 27 figs. and portrait of the author

Johan Ambrosius Barth Verlag
Leipzig
Price: D.M. 6.80

This monograph was published after the death of its author. It is his last scientific work. The editor has provided it with a biographical and historical preface.

The author's starting point is the idea that the embryo at every moment of its life must form a well-balanced functional unity, adapted to the changing internal and external circumstances, notwithstanding the fact that some of its constituent parts will acquire their proper functions only at much later stages. Some of these parts acquire temporary functions of a different nature.

The problems which result from the conflicting demands put to the embryo, are illustrated with many examples from different developmental periods and organ systems. The conclusions at which the author arrives are often very hypothetical and speculative. Nevertheless it is interesting to take notice of a train of thought which has up till now been neglected too much.

"ENTWICKLUNGSPHYSIOLOGIE DER INSEKTEN"

2nd edition, 1958

by O. Pflugfelder
(Probleme der Biologie, Bd. 5)
490 pp., 142 figs.

Akad. Verlagsgesellsch.
Geest & Portig K.-G.
Leipzig
Price: D.M. 35.—

The first edition of this book appeared in 1952. The present edition has been considerably extended. The size has increased by 158 pages (nearly 50 %). Fifteen figures were added. Many new results could be incorporated. Entirely new chapters were written on postembryonic development, growth and diapause (particularly the external factors influencing them), biochemical development, and the influence of the nervous system on muscle development.

The manuscript of the second edition was already finished in 1955, but the literature of 1956 and 1957 could be included in the bibliography. This is now more than twice as long as in the first edition (77 pages).

"DEVELOPMENTAL CYTOLOGY"

1959

Edited by Dorothea Rudnick
(16th Growth Symposium, 1957)
215 pp., 28 figs., 23 pls.

The Ronald Press Co.
New York
Price: $ 7.00

The present volume embodies all papers delivered at a Symposium held at Kingston, R.I., in 1957. Six out of the ten authors are American scientists.

The papers discuss new results concerning chromosomes, nucleoli, cytoplasmic organelles, cellular chemistry, and immune properties, all in relation to cellular differentiation. The results were obtained in a variety of organisms, both animal and vegetal.

The well-printed book is concluded by an alphabetical index.

"CELL, ORGANISM AND MILIEU"

1959

Edited by Dorothea Rudnick
(17th Growth Symposium, 1958)
326 pp., 104 figs.

The Ronald Press Co.
New York
Price: $ 8.00

This volume contains the papers delivered at a Symposium held in 1958 in South Hadley, Mass. Nine out of the twelve authors are scientists from the U.S.A.

The subjects of the various papers are only loosely related. Among the subjects discussed are differentiation and biochemical environment, enzyme adaptation in development, chemistry and physiology of insect growth hormones, experimental modification of root development, control of growth and differentiation by carbon dioxyde, and psychiology and biochemistry of the mammalian blastocyst.

The neatly printed book is concluded by an alphabetical index.

"REGENERACIJA I SOMATIČESKIJ EMBRIOGENEZ"

(Regeneration and somatic embryogenesis)

1959

by B. P. Tokin
267 pp., 83 figs.

Published by the
University of Leningrad

In the present monograph the phenomena of regeneration and somatic embryogenesis (i.e. development from cells other than gametes) in plants and animals are compared, and discussed against the background of what is known about "sexual" embryogenesis (development from gametes).

Special attention is paid to such problems as: integration of the organism, determination of cells, regulation, organization, evolution and ontogenesis of regenerative capacities, behaviour of cells and tissues during regeneration, and the relations between regeneration and tumor growth.

In the bibliography the Russian titles occupy six of the nine pages.

"ENTWICKLUNGSGESCHICHTE UND FEHLBILDUNGEN DER WIRBELSÄULE"

1958

by G. Töndury
(Die Wirbelsäule in Forschung und Praxis, Band 7)
196 pp., 173 figs.

Hippokrates-Verlag
Stuttgart

This extremely thorough monograph will primarily be of interest to human anatomists and medical practitioners. It starts with an extensive account of the normal development of the vertebral column in man. Then follows a short chapter summarizing the data on the developmental physiology of the vertebral column in non-mammalian vertebrates, resulting from direct surgical intervention. This chapter is followed by a chapter on abnormalities of the spinal column in mammals, produced by indirect methods, such as irradiation, reduction of oxygen supply and various genetical factors. The concluding chapter discusses the abnormalities of the spinal column in man.

The quality of the numerous illustrations, mostly photographs, is above all criticism, and so is the printing of the book. It is rounded off by a bibliography and a subject index.

"DIFFERENCIATION DES CELLULES SEXUELLES ET FECONDATION CHEZ LES PHANEROGAMES"

1958

by B. Vazart
(Protoplasmologia, Bd. VII, 3a)
158 pp., 54 figs.

Springer-Verlag
Wien

The present monograph forms part of the volume of "Protoplasmologia" dealing with fertilization and nuclear fusion. It contains a mainly descriptive account of gametogenesis and fertilization in Gymnosperms and Angiosperms respectively. The book is illustrated mainly with photomicrographs.

"GESTATION"

1958

Editor: C. A. Villee
(Transactions of the fourth Conference, 1957)
216 pp., 64 figs., 20 tbs.

The Josiah Macy, Jr. Foundation
New York
Pric: $ 4.50

This report is a sequel to the series of reports announced in the seventh full issue (p. 216). It contains four group discussions, dealing with the physiology of fetal fluids, the origin of amniotic fluid, uptake of materials by the yolk sac, and the development of fetal immunity.

"MORFOLOGIJA ORGANA OBONJANIJA"

(Morphology of the olfactory organ)

1957

by Ja. A. Vinnikov and L. K. Titova
296 pp. with 149 figs.

State Publishing Office of Medical Literature
Moscow

The present monograph deals with the vertebrate olfactory organ. Three of the five chapters are of particular interest to embryologists, since they discuss normal development, development *in vitro* and regeneration of the olfactory organ.

The bibliography covers 21 pages. Nearly half of the titles are russian ones; many of these are recent papers.

Most of the illustrations are photomicrographs, which are unfortunately very poorly reproduced.

REPORTS FROM THE DEVELOPMENTAL BIOLOGY CONFERENCE SERIES, 1956
1958/1959

Paul Weiss
organizer and general chairman

The Univ. of Chicago Press

"EMBRYONIC NUTRITION" (1958)

Editor: Dorothea Rudnick

113 pp., 34 figs.

Price: $ 3.25

Embryonic energy exchange — Metabolic patterns in the sea-urchin embryo — Yolk utilization in fishes — Antigens as tracers of embryonic synthesis — Nutrient necessities in chick development — Enzymes: formation and growth.

"REGENERATION IN VERTEBRATES" (1959)

Editor: Ch. S. Thornton

108 pp., 30 figs., 2 pls.

Price: $ 3.25

Regeneration of the retina, iris, and lens — The development of mesodermal axial structures in regeneration and embryogenesis — The cellular basis of limb regeneration — The influence of nerves on regeneration — The role of hormones in regeneration — The effect of X-rays on regenerative capacity.

"CYTODIFFERENTIATION" (1958)

Editor: Dorothea Rudnick

148 pp., 27 figs.

Price: $ 3.75

Cytodifferentiation and genic endowment — Chemical and morphological indices of cytodifferentiation — Special instances of cytodifferentiation: myogenesis, fibrogenesis — The internal milieu in cytodifferentiation — Cancer, growth, and cytodifferentiation.

"ENVIRONMENTAL INFLUENCES ON PRENATAL DEVELOPMENT" (1958)

Editor: Beatrice Mintz

87 pp., 26 figs.

Price: $ 3.00

Experimental alteration of morphogenesis: medical and biological significance — Specificity of teratogenic agents, of responding tissues, and of time of interaction — Extragenic factors causing variations in development — Interaction between the early embryo and its environment — Multiplicity of effects of teratogenic agents — Nutritional requirements for morphogenesis; action of metabolic inhibitors — Interaction of areas of growth — Developmental relationships and interactions in time and space.

"IMMUNOLOGY AND DEVELOPMENT" (1958)

Editor: Mac V. Edds, Jr.

58 pp.

Price: $ 2.50

Progressive transformations of individual molecular species — Essentialness of antigens in growth and development — Localization and cytotoxicity — Acquired tolerance — Homografts — Prolongation of graft survival — Effect of antisera on tumors — Effect of tissues and antisera on normal tissue — Cell-surface reactions during development — Antigen-antibody systems in invertebrates.

"PHYSIOLOGY OF INSECT DEVELOPMENT" (1959)

Editor: F. L. Campbell

167 pp., 25 figs. Price: $ 4.00

Embryology — Larval development and tissue culture — Metamorphosis and diapause — Histolysis and tumors — Regeneration.

"DYNAMICS OF PROLIFERATING TISSUES" (1958)

Editor: Dorothy Price

96 pp., 24 figs. Price: $ 3.25

Renewal systems — Methods for estimating the rate of proliferation — Methods for estimating production and delivery of white blood cells — Methods for estimating cell loss — Examples of renewal systems — Factors influencing the rate of cell production and cell loss in renewal systems — Blood cell-producing organs — Factors influencing blood cell production.

"ENDOCRINES IN DEVELOPMENT" (1959) Editor: R. L. Watterson

142 pp., 12 figs. Price: $ 4.00

Ontogeny of selected endocrine glands: the thyroid, the adrenals, the gonads, the parathyroids — Endocrine organs of arthropods, with special emphasis on insects — Ontogeny of selected endocrine receptors: the gonads and gonoducts — Conditioning effects on end organs — Ontogeny of selected hormone-dependent receptors: feather papillae and pigment cells — Synergistic action of hormones — Integration of the endocrine system — Mode of action of hormones.

"MITOGENESIS" (1959) Editors: H. S. Ducoff and C. F. Ehret

114 pp., 22 figs. Price: $ 3.25

Mitogenesis and growth — Premitotic growth — Amitosis — Growth promoters and inhibitors — Elements of mitosis — The mitotic spindle — The time element and synchronization — Mitotic triggers and endogenous stimuli of mitosis — Cell interactions and environmental factors — Differentiation and division — Origin of diversity — Degrees of differentiation — Radiation sensitivity of division versus differentiation.

"WOUND HEALING AND TISSUE REPAIR" (1959)

Editor: W. Bradford Patterson

83 pp., 25 figs. Price: $ 2.75

Biological aspects of wound healing — Cellular components of the wound — The ground substance — Wound healing and sulfur metabolism — Systemic factors acting on the healing wound — The healing of bone — Abnormal healing.

This series consitutes a complete record of a series of developmental biology conferences held in 1956 under the auspices of the National Academy of Sciences — National Research Council (U.S.A.). Among the participants were nearly 300 scientists from the U.S.A., and 54 scientists from 19 other countries. Each conference had a reporter, who took care of the editorial work for the report.

The conferences usually took the form of a mixture of individual research reports, and general discussions centering around key questions put forward by the chairman, a distinguished authority in the field in question.

Most books contain more or less continuous reports of the proceedings, some almost verbal renderings, others more freely conceived accounts. Lists of references either follow individual papers, or are given at the end of the book. In two cases (nos. 5 and 6) only key references have been given.

Much care has been devoted to the printing and binding of the books, and the outcome forms a very attractive series, which will certainly find its way to those embryologists who like to read lively and stimulating discussions of a number of topics which are at present in the centre of interest.

"PROBLEMY SOVREMENNOJ EMBRIOLOGII"

(Problems of contemporary embryology)

1956

Proc. Leningrad Embryol. Conf. 1955
400 pp., many figs.

Published by the Leningrad State University

This book is an extensive conference report, consisting of 62 papers. For those who read Russian, it reflects the contemporary situation in the U.S.S.R. in many fields of embryological research, with the emphasis on animal embryology.

The papers are arranged in the following sections: germ cells, fertilization and early stages (12 papers, of which 6 botanical); embryonic histogenesis (7 papers); developmental periodization (7 papers); embryology and evolution (6 papers); physiology of development (7 papers); human and pathological embryology (6 papers); embryonic immunity (8 papers); regeneration and asexual reproduction (6 papers, of which 1 botanical). The last section is devoted to more general considerations of the task of contemporary (especially Soviet) embryology.