

guidelines for future research that all those in the field could profitably consider.

Each of the various approaches to understanding memory taken by the other contributors offers a way in which mode of theorizing might be anchored and constrained. First there is a conceptual or philosophical approach, represented by a chapter by William Estes distinguishing among functions of a theory and by a wild and wonderful chapter by Michael Turvey and Robert Shaw advocating a new metaphysics. But as a science the study of memory needs more concrete moorings than can be gained from purely philosophical considerations. A second possibility, a physiological approach, is no more helpful. As is illustrated in chapters by Holger Hydén on protein synthesis in the brain and David Ingvar on cerebral blood flow, the content of this approach is currently far too remote from the phenomenological and behavioral manifestations of memory to be relevant to the concerns of most psychologists.

The remaining two approaches might suit the purposes better. One is concerned with the pathology of memory and the other with the analysis of problems in the world outside the laboratory. The former is represented by rather similar chapters by Tim Shallice and the late Alexander Luria, the latter by a chapter on reading comprehension and readability by Walter Kintsch and Douglas Vipond and by one on face recognition by Alan Baddeley. These approaches not only are concrete but may also be of sufficient psychological relevance to constrain theoretical development in a satisfactory way. Thus, theories of memory could be evaluated according to whether they allow an adequate account of known malfunction or by a criterion of relevance to matters of everyday life. But, for the time being at least, most theorists, including most of the contributors to the present volume, apparently see no need for such evaluation.

There is little doubt that the book will be seen as an important contribution to the field, for indeed it is a collection of major statements from many of today's leading memory researchers. And yet, even though its chapters are theoretical and speculative, the overriding impression the reader is left with is that the field is diverging at an unprecedented rate and that the prospects of theoretical unification have never been more remote.

MICHAEL J. WATKINS

*Department of Psychology,
Princeton University,
Princeton, New Jersey 08544*

Books Received

Adjuvant Therapies and Markers of Post-Surgical Minimal Residual Disease I. Markers and General Problems of Cancer Adjuvant Therapies. Papers from a meeting, Paris, June 1978. G. Bonadonna, G. Mathé, and S. E. Salmon, Eds. Springer-Verlag, New York, 1979. xviii, 152 pp., illus. \$27. Recent Results in Cancer Research, 67.

Advances in Cancer Research. Vol. 29. George Klein and Sidney Weinhouse, Eds. Academic Press, New York, 1979. xii, 458 pp., illus. \$36.

Advances in Nuclear Physics. Vol. 11. J. W. Negele and Erich Vogt, Eds. Plenum, New York, 1979. xiv, 420 pp., illus. \$37.50.

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Advances in Photochemistry. Vol. 11. James N. Pitts, Jr., George S. Hammond, Klaus Gollnick, and Daniel Grosjean, Eds. Interscience (Wiley), New York, 1979. xiv, 538 pp., illus. \$35.95.

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Alone Together. Social Order on an Urban Beach. Robert B. Edgerton. University of California Press, Berkeley, 1979. viii, 224 pp., illus. \$10.95.

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Cecil Textbook of Medicine. Paul B. Beeson, Walsh McDermott, and James B. Wyngaarden, Eds. Saunders, Philadelphia, ed. 15, 1979. lii, 2358 pp., illus. + index. \$46; in two volumes, \$56.

The Cell Nucleus. Vol. 7, Chromatin, Part D. Harris Busch, Ed. Academic Press, New York, 1979. xxx, 602 pp., illus. \$49.50.

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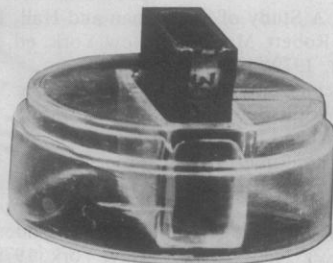


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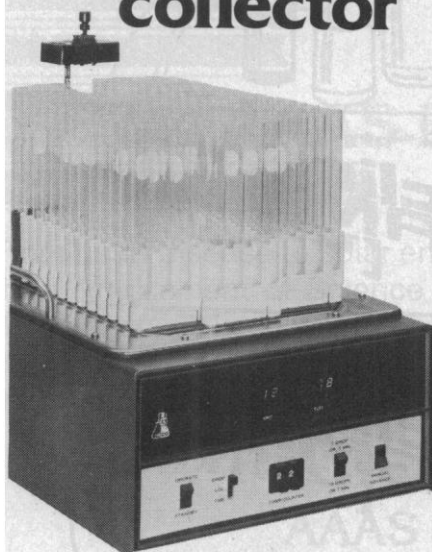


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Hospice. Prescription for Terminal Care. Kenneth P. Cohen. Aspen Systems Corporation, Germantown, Md., 1979. xii, 304 pp. \$22.75.

Host-Parasite Interfaces. Proceedings of a symposium, Lincoln, Neb., Oct. 1977. Brent B. Nickol, Ed. Academic Press, New York, 1979. xii, 144 pp., illus. \$11.

How to Find Chemical Information. A Guide for Practicing Chemists, Teachers, and Students. Robert E. Maizell. Wiley-Interscience, New York, 1979. xxvi, 262 pp. \$17.95.

How to Identify Mushrooms to Genus. Mad River Press, Eureka, Calif., 1978. Four volumes. Vol. 1, Macroscopic Features, ed. 2. David L. Largent. iv, 86 pp., illus. Paper, \$4.35. Vol. 2, Field Identification of Genera. David L. Largent and Harry D. Thiers. viii, 32 pp. Paper, \$3. Vol. 3, Microscopic Features. David Largent, David Johnson, and Roy Watling. x, 148 pp., illus. Paper, \$7.75. Vol. 4, Keys to Families and Genera. Daniel E. Stuntz. David L. Largent and Roy Watling, Eds. viii, 94 pp. Paper, \$5. The four-volume set, \$15.

Human Cultures and Evolution. Manuel Alfonso. Vantage Press, New York, 1979. viii, 136 pp. \$6.95.

The Human Mosaic. A Thematic Introduction to Cultural Geography. Terry G. Jordan and Lester Rowntree. Harper and Row, New York, ed. 2, 1979. xiv, 482 pp., illus. \$16.95.

Introduction to Macromolecular Chemistry. Hans Batzer and Friedrich Lohse. Translated from the German edition (Basel, 1976) by William Good. Wiley, New York, ed. 2, 1979. xiv, 298 pp., illus. \$34.50.

Know and Grow Vegetables. P. J. Salter, J. K. A. Bleasdale, and others. Oxford University Press, New York, 1979. x, 212 pp., illus. \$11.

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Margaret Mead. Some Personal Views. Rhoda Metraux, Ed. Walker, New York, 1979. 286 pp. \$9.95.

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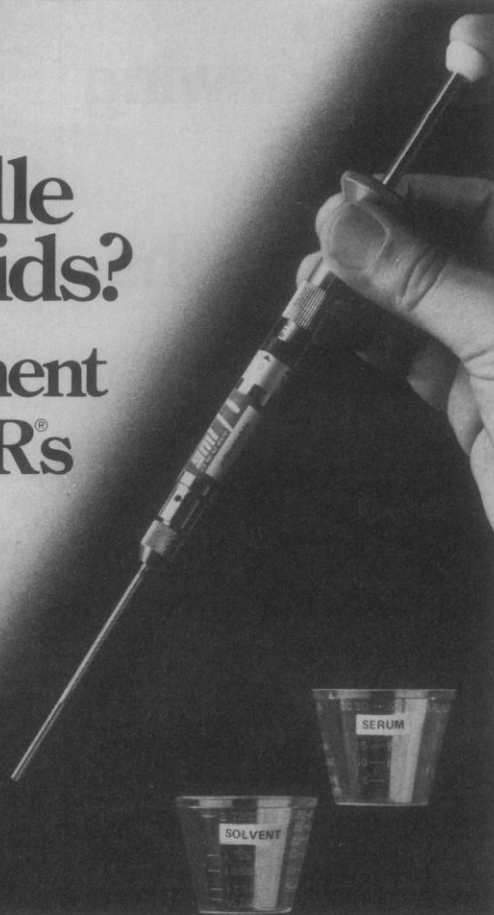
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White and David Kimpton, Eds. Commonwealth Scientific and Industrial Research Organization, Melbourne, 1977 (U.S. distributor, ISBS, Forest Grove, Ore.). 48 pp. Paper, \$2.

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Technological Innovation. A Critical Review of Current Knowledge. Patrick Kelly and Melvin Kranzberg, Eds. San Francisco Press, San Francisco, 1978. xviii, 390 pp. \$27.50.

Theoretical and Practical Aspects of Uranium Geology. Papers from a meeting, London, Dec. 1977. The Royal Society, London, 1979. viii, 452 pp., illus. £16. First published in *Philosophical Transactions of the Royal Society of London*, series A., vol. 291, pages 253-452.

The Theory of Stochastic Processes III. I. I. Gihman and A. V. Skorohod. Translated from the Russian edition (Moscow, 1975) by S. Kotz. Springer-Verlag, New York, 1979. viii, 388 pp. \$47.80. *Grundlehren der mathematischen Wissenschaften* 232.

Thermodynamic Properties in SI. Graphs, Tables, and Computational Equations for Forty Substances. William C. Reynolds. Stanford University Department of Mechanical Engineering, Stanford, Calif., 1979. x, 174 pp. Paper, \$4.50.

Thermodynamics and Statistical Mechanics. Peter T. Landsberg. Oxford University Press, New York, 1978. xiv, 462 pp. \$26.

Thermomechanics of Magnetic Fluids. Theory and Applications. Proceedings of a meeting, Udine, Italy, Oct. 1977. B. Berkovsky, Ed. Hemisphere, Washington, D.C., and McGraw-Hill, New York, 1978. xii, 318 pp., illus. \$39.75.

Topics in Carbon-13 NMR Spectroscopy. Vol. 3. George C. Levy, Ed. Wiley-Interscience, New York, 1979. xiv, 398 pp., illus. \$35.

Topics in Enzyme and Fermentation Biotechnology 3. Alan Wiseman, Ed. Horwood, Chichester, England, and Halsted (Wiley), New York, 1979. 294 pp. \$54.95.

TOSCA: The Total Social Cost of Coal and Nuclear Power. Linda Gaines, R. Stephen Berry, and Thomas Veach Long, II. Ballinger (Harper and Row), Cambridge, Mass., 1979. xiv, 126 pp., illus. \$17.50.

Toxic Dinoflagellate Blooms. Proceedings of a conference, Key Biscayne, Fla., Oct. 1978. Dennis L. Taylor and Howard H. Seliger, Eds. Elsevier/North-Holland, New York, 1979. xx, 506 pp., illus. \$50. Developments in Marine Biology, vol. 1.

Transformations. Mathematical Approaches to Culture Change. Colin Renfrew and Kenneth L. Cooke, Eds. Academic Press,

New York, 1979. xxiv, 516 pp., illus. \$39.50.

Treatise on Materials Science and Technology. Vol. 13, Wear. Douglas Scott, Ed. Academic Press, New York, 1979. xviii, 498 pp., illus. \$49.50.

Tropical Medicine. From Romance to Reality. Proceedings of a conference, Bethesda, Md., Dec. 1977. Clive Wood, Ed. Academic Press, London, and Grune and Stratton, New York, 1978. x, 286 pp., illus. \$27.25.

Turbulent Shear Flows I. Papers from a symposium, University Park, Pa., Apr. 1977. F. Durst, B. E. Launder, F. W. Schmidt, and J. H. Whitelaw, Eds. Springer-Verlag, New York, 1979. viii, 418 pp., illus. \$49.80.

Unified Theory of the Mechanical Behavior of Matter. M. J. Marcinkowski. Wiley-Interscience, New York, 1979. xviii, 260 pp., illus. \$24.95.

The United States and the Global Struggle for Minerals. Alfred E. Eckes, Jr. University of Texas Press, Austin, 1979. xii, 354 pp. \$18.95.

The University of Vermont College of Medicine. Martin Kaufman. University of Vermont College of Medicine, Burlington, 1979 (distributor, University Press of New England, Hanover, N.H.). xviii, 276 pp., illus. \$15.

The Use and Significance of Pesticides in the Environment. F. L. McEwen and G. R. Stephenson. Wiley-Interscience, New York, 1979. xvi, 538 pp., illus. \$27.50.

The Use of Biological Specimens for the Assessment of Human Exposure to Environmental Pollutants. Proceedings of a workshop, Luxembourg, Apr. 1977. A. Berlin, A. H. Wolff, and Y. Hasegawa, Eds. Published for the Commission of the European Communities by Nijhoff, The Hague, 1979. x, 368 pp., illus. Dfl. 95.

Utility and Use of Large-Scale Mathematical Models. Proceedings of a workshop, Gaithersburg, Md., Apr. 1977. Saul I. Gass, Ed. National Bureau of Standards, Washington, D.C., 1979 (available from the Superintendent of Documents, Washington, D.C.). vi, 224 pp., illus. Paper, \$4.25. NBS Special Publication 534.

Voluntary Inhalation of Industrial Solvents. Papers from a conference, Mexico City, June 1976. Charles Wm. Sharp and L. Thomas Carroll, Eds. National Institute on Drug Abuse, Rockville, Md., 1978. x, 404 pp., illus. Paper, DHEW Publication No. (ADM) 79-779.

Von Neumann Regular Rings. K. R. Goodearl. Fearon-Pitman, Belmont, Calif., 1979. xviii, 370 pp. \$46. Monographs and Studies in Mathematics, 4.

Wholeness and Breakdown. A Model for the Interpretation of Nature and Society. Hans Mol. The Dr. S. Radhakrishnan Institute for Advanced Study in Philosophy, University of Madras, Madras, India, 1978. x, 126 pp. Paper, Rs. 13. A Golden Jubilee Publication.

Wildlife and America. Contributions to an Understanding of American Wildlife and Its Conservation. Papers from a symposium, Washington, D.C., 1976. Howard P. Brokaw, Ed. Council on Environmental Quality, Washington, D.C., 1978 (available from the Superintendent of Documents, Washington, D.C.). x, 532 pp., illus. \$8.50.

World Food Production—Environment—Pesticides. Papers from a congress, Zurich, July 1978. H. Geissbühler, Ed. Pergamon, New York, 1979. vi, 62 pp. \$20.

Your Solar Energy Home. Including Wind and Methane Applications. Derek Howell. Pergamon, New York, 1979. vi, 232 pp., illus. Cloth, \$25; paper, \$8. Pergamon International Library.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising closing for a particular Friday issue is Wednesday, 3 1/2 weeks before. Advertising is accepted only in writing; no abbreviations. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, or handicap.

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1515 Massachusetts Ave., NW
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POSITIONS WANTED

Agronomist/Botanist: Ph.D. 1975. Teaching, research experience with various horticultural and agronomic crops. Four years of experience breeding hybrid corn in Southeastern United States. Conducted surveys of plant communities for environmental impact studies. Prefers research or teaching position in Southeastern United States but will consider any geographic area, including foreign assignment. Available immediately. Box 34, SCIENCE. X

Experimental Pathologist/Immunologist, Ph.D. 1979. Broad experience in the methodologies of humoral and cell-mediated immunity, immunopathology. Seeks responsible position, basic or applied research, in medical center or industry. Box 35, SCIENCE. X

General Biology, Genetics, Ecology, Botany, Plant Physiology. Broad teaching, research experience, M.S., plant physiology. Strong commitment to quality undergraduate education. Prefers 4-year or junior college. J. Mendenhall, 1305 8th Street, Greeley, Colorado 80631. 2/15, 22, 29

Interferonologist, Virologist, Molecular Biologist. D.Sc. 1978. More than 4 years of experience in the interferon field. Familiar with all aspects, particularly the characterization, modification, and fragmenting of interferon. Will consider a responsible academic, research, or industrial position. Box 30, SCIENCE. X

M.D. 1975; Ph.D., Sc.D. 1978; **Protein Chemistry, Immunochimistry;** 24 original publications on isolation and characterization of membrane receptors, humoral transport proteins, antigens, immune globulins, and so forth; teaching experience, editing, lecturing; available April 1980. Academic appointment for clinical/basic research, including protein purification, structural analysis, and protein-mediated submolecular mechanisms. Box 36, SCIENCE. X

Viral Immunologist. Ph.D. 1978. Two years of postdoctoral training in clinical virology and immunology. Research experience in cell-mediated immunity and viral pathogenesis. Seeks clinical research position. Reply to: Box 37, SCIENCE. X

POSITIONS WANTED

Physical Oceanographer. Ph.D. 1973. Currently on research faculty, seeks university teaching position with research possibilities. Primary interests are continental shelf processes, upwelling, western boundary currents. Background includes extensive fieldwork, data analysis using spectral methods, and numerical modeling. Teaching experience. D. Johnson, Meteorology and Physical Oceanography, Rosensiel School of Marine and Atmospheric Science, 4600 Rickenbacker Causeway, Miami, Florida 33149. Telephone: 305-350-7491. X

POSITIONS OPEN

ANALYTICAL CHEMIST OR BIOCHEMIST. Tenure-track position at the assistant or associate professor level anticipated for September 1980. Successful candidate will establish a research program compatible with the Environmental Sciences and Resources Ph.D. program in the Chemistry Department, instruct courses at the undergraduate and graduate levels, and have completed Ph.D. by commencement of position. Provide curriculum vitae, three letters of recommendation, and statement of research interests by 1 March 1980 to: Dr. David McClure, Chemistry Department, Portland State University, P.O. Box 751, Portland, Ore. 97207. An Equal Opportunity/Affirmative Action Employer.

ANATOMIST. The Department of Allied Health Education is seeking applications for a tenure-track position at the rank of assistant professor, beginning 1 July 1980. An adjunct appointment with the Department of Anatomical Sciences is also possible. Candidates should have a Ph.D. at the time of appointment, be well versed in the four subdisciplines of anatomy, and be committed to excellence in teaching allied health students. Previous teaching experience and an interest in conducting independent research are desirable. Deadline for applications is 15 March 1980. Send letter of application, curriculum vitae, and three letters of recommendation to: Dr. Randall B. Grubb, Department of Anatomical Sciences, University of Oklahoma at Oklahoma City, P.O. Box 26901, Oklahoma City, Okla. 73190. An Equal Opportunity/Affirmative Action Employer.

ANATOMIST. The program in Medical Sciences at Florida State University is seeking a qualified anatomist at the assistant professor level to teach gross anatomy to first-year medical students. The Program in Medical Sciences is a first-year medical program at Florida State and Florida A & M Universities. After completing the first-year medical curriculum students transfer to the University of Florida College of Medicine in Gainesville to complete the M.D. degree. Qualifications for the position include a Ph.D. or M.D. degree and experience in teaching gross anatomy. Applicants should have sufficient evidence of scholarship and research potential to qualify for a tenure-track appointment in an appropriate academic department at Florida State University. Send letters of application along with curriculum vitae and three letters of recommendation to: Dr. Robert H. Reeves, Director, Program in Medical Sciences, Florida State University, Tallahassee, Florida 32306. Application deadline is 30 April 1980.

An Affirmative Action/Equal Opportunity Employer.

ANATOMIST, PHARMACOLOGIST, PHYSIOLOGIST

The Ohio College of Podiatric Medicine is seeking qualified individuals to fill academic positions in **PHARMACOLOGY, PHYSIOLOGY** (neuromuscular), and **GROSS ANATOMY** (embryology and/or neuroanatomy).

The position is full-time with rank open. Experience teaching medical students is desirable. Research is encouraged. Qualifications include the Ph.D. and/or D.P.M. degree. Send curriculum vitae with names of three references to: Dr. R. N. Iyer, Director, Division of Basic Sciences, Ohio College of Podiatric Medicine, 10515 Carnegie Avenue, Cleveland, Ohio 44106.

Equal Opportunity Employer

ASSISTANT PROFESSOR OF DERMATOLOGY. Qualifications: Board-certification of internal medicine and dermatology. At least 2 years in basic research training and good publication record required. Replies to: R. L. Dobson, M.D., Chairman, Department of Dermatology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29403. Medical University of South Carolina is an Equal Opportunity Employer. Women and minority candidates are urged to apply.

POSITIONS OPEN

UNIVERSITY OF SOUTH FLORIDA

The **DEPARTMENT OF ANATOMY**, College of Medicine, at the University of South Florida, invites applications for two tenure-track positions at the assistant and associate professor levels beginning July 1980. Applicants should hold the Ph.D. in anatomy and/or M.D. Applicants should be qualified to teach either gross anatomy/embryology or microscopic anatomy/neuroanatomy to medical and graduate students.

Applicants for the assistant professor level should have at least 1 year of postdoctoral experience and show promise of developing an active research program in electron microscopy and/or intravital microscopy of microvasculature. Applicants for the associate professor level must have the ability to perform independent research in developmental anatomy/teratology and regeneration and/or problems related to vascular growth and microcirculation.

Salary and rank are dependent upon qualifications and experience. Applicants are invited to submit curriculum vitae, names and addresses of three references, and a letter describing research and teaching interests to: Dr. J. Rhoding, Department of Anatomy, College of Medicine, University of South Florida, 12901 North 30 Street, Tampa, Florida 33612.

Deadline for receipt of applications is 1 April 1980. The University of South Florida is an Affirmative Action/Equal Opportunity Employer.

ANATOMIST

Applications are invited from qualified persons prepared to establish an effective research program and to enter enthusiastically into teaching, primarily in gross anatomy. Experience in teaching is expected; research in cellular or developmental biology is preferred; salary and rank commensurate with experience. Closing date: 15 March 1980. Send curriculum vitae, relevant publications, and names of three references to: Dr. Maurice H. Bernstein, Department of Anatomy, Wayne State University, 540 East Canfield, Detroit, Mich. 48201. An Equal Opportunity/Affirmative Action Employer.

ANIMAL MOLECULAR GENETICIST. Associate or full professor position beginning 1 July 1980. The successful applicant will be expected to teach an undergraduate course in human genetics and a graduate course in an area of expertise. Research emphasis could include gene expression or regulation, immunogenetics, or genetical and molecular aspects of chromatin structure. Research problems of the candidate should be related to California agriculture. Send curriculum vitae, including research plans, reports, and three letters of reference, to: The Search Committee, Department of Genetics, University of California, Berkeley, California 94720. Application deadline: 28 February 1980. The University of California is an Affirmative Action Employer.

ASSISTANT PROFESSOR with a thorough background in biochemistry and 2 years of postdoctoral training. Preference will be given to individuals whose research experience and/or interest is in the field of developmental biochemistry and biochemistry of inborn errors of metabolism. Teaching of biochemistry to medical and graduate students will be expected. Send curriculum vitae and names of three references to: Frits A. Hommes, Ph.D., Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30912. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR: ANATOMY. Applicants should have a strong background in cell biology, especially cellular neurobiology, with postdoctoral research experience and demonstrated independent research ability. Teaching experience in gross anatomy desirable. Submit curriculum vitae before 31 March 1980 to: Dr. G. D. Pappas, Head, Department of Anatomy, University of Illinois College of Medicine, P.O. Box 6998, Chicago, Ill. 60680. The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.

RESEARCH ASSOCIATE IN NEUROBIOLOGY. Studies center on synaptic structure-function correlation. Experience in one or more of the following techniques desirable: EM autoradiography, cellular neurophysiology, cell culture, and immunocytochemistry. Send résumé to: Dr. G. D. Pappas, Head, Department of Anatomy, University of Illinois College of Medicine, P.O. Box 6998, Chicago, Ill. 60680. The University of Illinois is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.

POSITIONS OPEN

ANIMAL POPULATION ECOLOGY

The Department of Biology of the University of South Carolina is seeking applicants for a tenure-track position in **population biology**. This new position has been approved but is contingent on available funding for the 1980-1981 fiscal year. Candidates must be competent in empirical studies and familiar with the theoretical or biomathematical aspects of the discipline. Funds will be provided for initiation of research, but the potential to obtain grant support is requisite. Successful candidates will be expected to develop and maintain a vigorous program of research and teaching. Applicants should submit curriculum vitae, an outline of research interests, and names, addresses, and telephone numbers of at least three references by 17 March 1980 to: **Bruce C. Coull, Population Ecology Search Committee, Department of Biology, University of South Carolina, Columbia, S.C. 29208. The University is an Equal Opportunity/Affirmative Action Employer.**

UNIVERSITY OF ROCHESTER DEPARTMENT OF ORTHOPAEDICS ASSISTANT PROFESSOR

A tenure-track position is available beginning July to September 1980. Primary responsibility will be the development of an independent program in basic musculoskeletal research. Candidates with an M.D. and/or Ph.D. degree and postdoctoral experience in the biochemistry, cell biology, physiology, or endocrinology of hard tissue are encouraged to apply. Applicants should submit curriculum vitae with a description of research interests and the names of three references to:

Dr. John S. Brand
Department of Orthopaedics
University of Rochester Medical Center
Rochester, New York 14642

The University of Rochester is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSORS

Applications are invited from qualified M.S. and Ph.D.'s to fill the following positions:

PHYSIOLOGIST—A research-oriented physiologist to participate in teaching of lecture and laboratory courses in human physiology.

ANATOMIST—To participate in teaching of human gross anatomy, histology, and embryology.

Interest and capability of teaching microbiology with Logan College is a leading, fully accredited, chiropractic college that awards a B.S. in human biology and doctor of chiropractic degrees. It is located on a beautiful 110-acre campus outside of St. Louis.

Send applications to: **Chairman, Department of Basic Science, Logan College of Chiropractic, 1851 Schoettler Road, Chesterfield, Mo. 63017.**

Applications will close 1 month after the publication of this advertisement.

Affirmative Action/Equal Opportunity Employer

MCGILL UNIVERSITY BIOCHEMISTRY DEPARTMENT

ASSISTANT PROFESSORSHIP to teach graduate and undergraduate courses, supervise students, and maintain an active independent research program. Preference will be given in the area of molecular biology of mammalian cells. Candidates should have at least 2 years of postdoctoral experience. Curriculum vitae, including the names of at least three persons who can be contacted for letters of reference, should be sent to:

Dr. D. T. Denhardt, Search Committee
Department of Biochemistry
McIntyre Medical Sciences Building
McGill University
3655 Drummond Street
Montreal, Quebec, Canada H3G 1Y6

ASSISTANT PROFESSOR, ENVIRONMENTAL HEALTH

Full-time tenure-track position beginning fall 1980. Ph.D. and demonstrated teaching experience required. Training and/or work experience in occupational health, toxicology, or institutional environmental health highly desirable, though candidates with other qualifications are encouraged to apply. Teach existing courses and conduct research in area of specialty. Write: **Walter E. Funk, Health Department, School of Health Sciences, West Chester State College, West Chester, Pennsylvania 19380. Closing date: 15 March 1980.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT PROFESSOR, BIOLOGY DEPARTMENT. C. W. Post Center of Long Island University invites applications for an assistant professor position (tenure-track) in plant systematics and plant ecology. Applicants will be expected to help develop a program in the botanical sciences, teach courses at undergraduate and graduate (M.S.) levels, establish an active research program, and take responsibility for greenhouse facilities. Please send curriculum vitae to: **Director of Personnel, C. W. POST CENTER, LONG ISLAND UNIVERSITY, Greenvale, N.Y. 11548. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSORS BIOMEDICAL ENGINEERING

The Department of Biomedical Engineering of The Johns Hopkins University School of Medicine has openings for faculty members who will participate in its research and teaching activities. Applicants should have a doctoral degree. They will be expected to develop an independently funded research program which emphasizes either biomedical instrumentation or the application of engineering and/or mathematical techniques to the analysis of biological systems. Teaching responsibilities will include the advising of undergraduate bioengineering students, organization of undergraduate courses for bioengineering students, and the supervision of graduate students. Candidates should send curriculum vitae, a list of publications, one or more representative reprints or a detailed thesis summary, and the names and addresses of three references (who will not be contacted without permission) by 1 May 1980 to: **Director, Department of Biomedical Engineering, The Johns Hopkins University School of Medicine, 522 Traylor Building, 720 Rutland Avenue, Baltimore, Md. 21205. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR—FISH DISEASES. The Migratory Fish Research Institute, University of Maine at Orono, seeks an assistant professor of microbiology. Starting academic-year salary: \$14,000. Nontenure-track position, maximum of 3 years, beginning 1 September 1980. The successful applicant will be expected to develop an active research program in the area of fish diseases and initiate an advanced course in his/her specialty. Opportunity to supervise graduate students. Send curriculum vitae, reprints, and three letters of recommendation to: **Bruce L. Nicholson, Department of Microbiology and Migratory Fish Research Institute, 254 Hitchner Hall, University of Maine, Orono, Maine 04469. Application deadline: 10 March 1980. The University of Maine is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR OF PHYSICS

The Department of Physics and Astronomy at Beloit College has a tenure-track opening at the assistant professor level to begin in August 1980. Applicant must have a Ph.D. in experimental physics and is expected to teach intermediate electronics courses, participate in general physics, and teach advanced courses. Leadership of an advanced laboratory program and research or projects involving undergraduates is expected. Send résumé, three letters of reference, transcripts, and a statement regarding teaching and research interests by 1 March 1980 to: **Professor Robert Garrett, Beloit College, Beloit, Wis. 53511. Beloit College is an Equal Opportunity/Title IX Employer, M/F.**

ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology is seeking a candidate holding an M.D. or a Ph.D. degree with experience and interest in membrane transport processes. Field of interest can include theoretical, artificial model, cellular, or epithelial membrane transport systems.

Opportunities are available for both collaborative and independent research and for graduate and medical student teaching.

Please send complete curriculum vitae including publications and the names and addresses of three references to:

Chairman, Membrane Transport Search Committee
Department of Physiology
Yale University School of Medicine
333 Cedar Street, SHM B-107
New Haven, Conn. 06510

Applications from women and members of minority groups are encouraged. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

Department of Microbiology, University of Saskatchewan, has a tenurable vacancy for an **ASSISTANT PROFESSOR** with specialization in **immunology**. Appointment to commence 1 July 1980. Salary to be commensurate with experience. Deadline for receipt of applications: 31 March 1980. Apply to:

Dr. D. Eldinger, Head
Department of Microbiology
University of Saskatchewan
Saskatoon, Saskatchewan, Canada S7N 0W0

DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE

Applicants are invited for the tenure-track position of **ASSISTANT PROFESSOR**. Applicants must have an M.D. or Ph.D. degree with postdoctoral experience in research. The applicants will be expected to contribute equitably to the department's teaching efforts and to develop an independent research program. Anticipated starting date is 1 September 1980. Curriculum vitae, bibliography, and three letters of reference should be sent by 31 March to: **Dr. A. H. Neims, Chairman, Department of Pharmacology and Therapeutics, Box J-267, JHMC, University of Florida, Gainesville, Florida 32610. We are an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR OF PHYSIOLOGY

The Department of Physiology, Cornell University Medical College, invites applications from those with research experience in work with ion selective microelectrodes and fluctuation analysis on transporting epithelia. Applicants must be willing to teach aspects of mammalian systemic physiology. Candidates should send curriculum vitae and summary of research plan by 15 March 1980 to: **Erich E. Windhager, M.D., Professor and Chairman, Department of Physiology, Cornell University Medical College, 1300 York Avenue, New York, New York 10021. Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR, ZOOLOGY. Ph.D. with training and experience in invertebrate zoology or developmental zoology, to teach general zoology and other courses at undergraduate and graduate levels, and to develop a research program. Send résumé, a description of research interests, complete transcripts, and at least three references to: **Chairman, Department of Biological Sciences, University of Alaska, Anchorage, 3221 Providence Drive, Anchorage, Alaska 99504. Closing date for applications is 14 March 1980. The University of Alaska is an Equal Opportunity/Affirmative Action Employer.**

BIOCHEMIST. Visiting assistant professor appointment (2 years, commencing fall 1980; Ph.D. required) in Chemistry Department, Williams College, as replacement for faculty on leave. Assignments consist of a semester of senior-level biochemistry and a semester of general chemistry. Duties include lectures, two laboratory sections per week, and undergraduate research projects. Interested persons should send a résumé, description of research projects suitable for undergraduates, and the names and addresses of three references to: **Dr. J. H. Markgraf, Chairman, Department of Chemistry, Williams College, Williamstown, Mass. 01267. Deadline: 7 March 1980. An Affirmative Action/Equal Opportunity Employer.**

BOTANISTS

Two assistant professors, tenure-track, 9-month year for: (i) a person doing research on tissue culture of vascular plants related to either biochemical regulation, or protoplast isolation and fusion; and (ii) a person doing research on vascular plant anatomy with emphasis at the ultrastructural level. The successful candidates will be responsible for teaching lower-level botany and biology and graduate-level botany courses, continuing active and funded research programs, advising graduate students, and becoming involved in scholarly service. Requires a Ph.D., teaching and research experience, and a sound publication record. Salary: \$17,000 to \$18,000. Starts autumn 1980. Apply before 15 March 1980 by sending curriculum vitae and publications to: **Dr. Emanuel D. Rudolph, Chairman, Department of Botany, Ohio State University, 1735 Neil Avenue, Columbus, Ohio 43210, and including the names of at least three references who may be contacted for recommendations should they be desired. The Ohio State University is an Equal Opportunity/Affirmative Employer. All qualified persons, including women, members of minority groups, and the handicapped, are encouraged to apply.**

POSITIONS OPEN

ASSISTANT PROFESSOR, MEDICAL SCHOOL DEPARTMENT OF PHYSIOLOGY. To work independently in our Respiratory Physiology Group in an area related to cellular physiology or cellular biophysics of the lung or respiratory system. Address inquiries to: **Chairman of Physiology, Department of Physiology, University of Pennsylvania, School of Medicine, Philadelphia, Pennsylvania 19104.**

ASSOCIATE RESEARCH SCIENTIST

Position available immediately in the Iowa Cardiovascular Center and Department of Medicine for a person with three or more years of postdoctoral experience in neurophysiology as it relates to the cardiovascular system. Ability to record action potentials from autonomic nerves required. Ability to perform single-unit recordings from vagal or sympathetic afferents desirable. Salary negotiable from \$16,750. Send curriculum vitae and three letters of recommendation to: **Marc D. Thames, University of Iowa Hospital, Iowa City, Iowa 52242. The University of Iowa is an Equal Opportunity Employer.**

BOTANIST—ASSISTANT PROFESSOR. Ph.D. with specialty in cytology/plant development for tenure-track position. To teach some combination of general biology, cytology, plant anatomy, and specialty. Teaching load variable with research credit. Research and supervision of graduate students expected. Effective 1 August 1980. Send résumé and names of three references by 29 February 1980 to: **Personnel Office, East Tennessee State University, Box 24070A, Johnson City, Tennessee 37601. East Tennessee State University is an Affirmative Action/Equal Opportunity Employer.**

CELLULAR BIOLOGIST—Associate/assistant professor position effective prior to 1 September 1980. Position requires Ph.D. degree (pharmaceutical sciences, biochemistry, microbiology, or pathobiology), instructing pharmacy students in applied immunology, developing a drug-related, cellular processes research program in a new facility. Send application, résumé, and names of three references to: **Dr. E. J. Staba, College of Pharmacy, University of Minnesota, Minneapolis, Minn. 55455 by 1 April.**

CELL BIOLOGISTS—ANATOMISTS

The University of North Carolina at Chapel Hill invites applications for junior and senior faculty positions in the Department of Anatomy and Laboratories for Cell Biology. Applicants must have postdoctoral research experience and goals in cell surface or membrane biology, cellular immunobiology, cancer cell biology, somatic cell genetics, cellular neurobiology, or the biology of cytoskeleton or cell motility. Teaching opportunities will be in medical histology, neurobiology, human gross anatomy, or in graduate-level courses in cell biology. Send curriculum vitae, a brief description of research plans, and the names of three references to: **Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, 111 Swing Building 217H, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27514.**

An Equal Opportunity/Affirmative Action Employer

The School of Veterinary Medicine at the University of Wisconsin-Madison invites applications and nominations for the positions of **CHAIRMAN** of the Department of Structural and Functional Sciences and **CHAIRMAN** of the Department of Pathobiology. Candidates for the chairmanships would be responsible for the development of the appropriate departmental programs within the new School of Veterinary Medicine. Candidates would be expected to provide leadership in the development of the new professional program as well as in the conduct of research, graduate and postgraduate education, and continuing education in the veterinary medical sciences to which the university has long had a strong commitment. Candidates should have professional administrative experience relevant to their designated responsibilities and must possess the D.V.M. or equivalent degree, plus the appropriate Board certification or the Ph.D. degree. Candidates should have a record of scholarly achievement and other appropriate professional experience sufficient to qualify them for tenured rank in the university faculty.

Applications and nominations with supporting material will be accepted through 21 March or until the positions are filled. They should be sent to: **Dr. B. C. Easterday, Room 301, 333 North Randall, Madison, Wis. 53706.**

The University of Wisconsin-Madison is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and members of minority groups.

15 FEBRUARY 1980

POSITIONS OPEN

CELL BIOLOGY OF AGING

The Laboratory of Cytogerontology invites applications for the position of **assistant research cell biologist.** Applicants must have a Ph.D. or M.D., demonstrated excellence in research with experience in cell culture techniques, and an interest in gerontology. Responsibilities of the successful candidate will include research on several grant projects emphasizing cell reconstruction and fusion techniques. Salary commensurate with experience and funding assured for a minimum of 2 years. Applications will be accepted until 10 March 1980. Send summary of qualifications and experience, curriculum vitae, bibliography, salary requirements, and the names and addresses of three references to:

**Dr. Leonard Hayflick
Bruce Lyon Memorial Research Laboratory
Children's Hospital Medical Center
51st and Grove Streets
Oakland, California 94609**

An Equal Opportunity/Affirmative Action Employer

Cell and Tumor Biology of Human Colon Cancer—Postdoctoral Position. We immediately need for our active research group a creative, innovative, and motivated individual with a strong background in cell biology who is interested in the immunobiology and biochemistry of human colon cancer cell surface antigens. Experience in human tumor studies desirable. Salary range: \$12,000 to \$13,000. Send curriculum vitae, two letters of reference, and a paragraph describing your research interest to: **Box 33, SCIENCE. An Equal Opportunity Employer.**

THE UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE PITTSBURGH, PENNSYLVANIA DEPARTMENT OF ANATOMY CHAIRPERSON

Applications and nominations are invited for the position of chairperson of the Department of Anatomy. The candidates should be recognized scholars and investigators with demonstrated commitment to medical and graduate education.

Curriculum vitae and bibliography may be submitted to: **Robert E. Lee, M.D., Department of Pathology, Presbyterian-University Hospital, DeSoto at O'Hara Streets, Pittsburgh, Pennsylvania 15213.**

An Equal Opportunity/Affirmative Action Employer

CRYSTALLOGRAPHER

Candidates will be expected to work on the three-dimensional structure of ribosomal proteins. They should be trained in general or protein crystallography and, according to their experience, will be considered to lead or to join a group active in this area. Salary will be in the range of DM 40,000 to DM 60,000 per annum. Applicants should send their curriculum vitae with a list of publications and the names of referees to: **Professor H. G. Wittmann, Max-Planck-Institut für Molekulare Genetik, Ihnestrasse 63-73, D-1000 Berlin, Germany.**

DERMATOPATHOLOGIST. Associate professor. Qualifications: Board-certification in dermatology and dermatopathology. Experience in heading Division of Dermatopathology with approved residency training program and immunofluorescence laboratory required. Replies to: **R. L. Dobson, M.D., Chairman, Department of Dermatology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, S.C. 29403. Medical University of South Carolina is an Equal Opportunity Employer. Women and minority candidates are urged to apply.**

DIRECTOR, OREGON REGIONAL PRIMATE RESEARCH CENTER

The University of Oregon Health Sciences Center is seeking a director for the Oregon Regional Primate Research Center. The center has 230 employees and an operating budget of \$5.5 million. The director is responsible for establishing and maintaining a purposeful, balanced scientific program conducive to achievement of its research objectives.

Qualifications for this position include a doctorate degree and a strong record in research, administration, and education. Interested persons should send curriculum vitae, the names and addresses of three references, and a description of professional interests to: **James Metcalfe, M.D., Medical Research Foundation of Oregon, P.O. Box 449, Portland, Oregon 97207. Deadline for receipt of applications is 15 April 1980.**

The University of Oregon Health Sciences Center is an Equal Opportunity/Affirmative Action Employer.

DEAN OF THE OGDEN COLLEGE OF SCIENCE AND TECHNOLOGY WESTERN KENTUCKY UNIVERSITY

The Ogden College of Science and Technology of Western Kentucky University invites nominations and applications for the position of dean. The dean reports to the vice president for academic affairs and is responsible for the operation of a college with 145 faculty members. The college provides courses of study leading to 31 undergraduate and 14 graduate degrees in the Departments of Agriculture, Biology, Chemistry, Engineering Technology, Geography and Geology, Mathematics and Computer Science, and Physics and Astronomy. Western Kentucky University is a state-supported institution with an enrollment of more than 13,000.

The successful candidate must have a Ph.D. in a discipline appropriate to the college, administrative experience, and a long-term, full-time commitment to professionalism. In addition, the candidate is expected to have a record of sustained scholarly research and publication, a history of distinguished teaching, and a record of obtaining grants and contracts in support of research.

This is a 12-month position available summer 1980. The successful candidate will qualify for tenure with the rank of professor in the appropriate department. Salary will be commensurate with the responsibilities of the position and the qualifications of the successful applicant.

Applications together with complete résumés and three letters of reference must be received by 15 March 1980. Applications should be sent to: **Dr. Elmer Gray, Chairman, Search Committee, The Graduate College, Western Kentucky University, Bowling Green, Ky. 42101.**

Western Kentucky University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS OPEN COLLEGE OF AGRICULTURAL SCIENCES AND FOODS KING FAISAL UNIVERSITY HOFUF, SAUDI ARABIA Academic Year 1980-1981

The expanding College of Agricultural Sciences and Foods of King Faisal University invites inquiries from qualified applicants for the 1980-1981 academic year in the following fields: **Agromony, Horticulture, Beekeeping, Poultry Science, Biology, Chemistry, Physics, Botany, Biochemistry, Agricultural Extension, Plant Pathology, Agricultural Economics, Animal Science, Animal Ecology, Dairy Science, Agricultural Engineering, and Water Resources and Climatology.**

PREREQUISITES: Master's or equivalent degree; practical and/or teaching experience. Knowledge of Arabic is helpful but not required. Language of instruction is English. Positions available September 1980; interviews scheduled with the dean in Houston, London, and Ottawa in April/May 1980.

SALARY RANGES: Approximate annual U.S. equivalent; professor, \$25,469 to \$33,965; associate professor, \$22,779 to \$28,973; assistant professor, \$18,570 to \$27,487; and lecturer, \$11,611 to \$16,035. Salaries are paid monthly in Saudi riyals. Substantial increase in these salaries is being considered for 1980-1981.

BENEFITS: Free furnished accommodations; substantial educational allowance for up to four children. Air tickets to and from Saudi Arabia once per year for family of four. Sixty-day paid summer holiday; yearly bonus; overweight allowance. No Saudi income tax. Contracts are for 1 year and are renewable.

Send curriculum vitae with current telephone number and the names, addresses, and telephone numbers of three references to:

**Dr. Hussein M. Elarosi
Dean, College of Agricultural Sciences and Foods
King Faisal University**

c/o Saudi Arabian Educational Mission, 2221 West Loop South, Houston, Texas 77027;

OR

c/o P.O. Box 2, Sudbury-on-Thames, Middlesex TW16 5JP England.

POSITIONS OPEN

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) DEPARTMENT OF BIOLOGY

CINEMICROGRAPHER—Experience in time-lapse cinematography is required. Knowledge of polarization and fluorescence microscopy preferred. Applicant must be familiar with cell and tissue culture procedures and be capable of working independently. Degree: B.A. or equivalent. Send applications to:

Professor Eugene Bell
Department of Biology, Room 16-820
Massachusetts Institute of Technology
Cambridge, Mass. 02139

MIT is an Affirmative Action/Equal Opportunity Employer.

ENTOMOLOGIST. Tenure-track. Rank and salary commensurate with qualifications. Develop and conduct extension program to assist commercial floriculturists and pest control operators. Also serve homeowners with aid of technical assistant. Serve as a resource or training coordinator for state, county, and regional workers. Initiate and conduct investigations of current problems. Ph.D. or equivalent in entomology required. Position available immediately. Applications accepted until 1 April 1980, or until position is filled. Send letter indicating interest, curriculum vitae, transcripts, and names of three references to: **Gordon W. Fellows, Acting Chairman, Suburban Experiment Station, University of Massachusetts, 240 Beaver Street, Waltham, Mass. 02154.** An Equal Opportunity/Affirmative Action Employer.

EXPERIMENTAL PATHOLOGIST. The Department of Pathology at the College of Medicine, The Pennsylvania State University, invites applications for a tenure-track position in experimental pathology. Applicants should have an M.D. degree with some experience in pathology but Board-certification is not required. Candidates must have outstanding teaching ability. The candidate will be expected to develop an independent, productive program in cancer research or immunology. Please send curriculum vitae, names of at least three references, and a statement of current research activity and career objectives to:

Chairman, Department of Pathology
College of Medicine
The Pennsylvania State University
Milton S. Hershey Medical Center
Hershey, Pennsylvania 17033

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITION. The Department of Psychiatry of the Cornell University Medical College has an opening for a psychologist or behavioral scientist (psychiatrist, sociologist), with special expertise in research design and data evaluation. Demonstrated research capabilities in an area related to psychiatry (for example, psychometrics, neuropsychology, psychobiology, social psychology, clinical research, or outcome evaluation) would be expected. Academic level and salary for this full-time faculty position are negotiable. Applications should be sent to: **Daniel Stern, M.D., Department of Psychiatry, 525 East 68 Street, New York, New York 10021.** An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS

As a result of the trend of increasing enrollments, applications are being accepted for fall 1980 in the following disciplines at the associate and baccalaureate levels:

Aeronautical Technology
Architectural Engineering Technology
Building Construction Technology
Civil Engineering Technology
Computer Science Engineering Technology
Electrical/Electronics Engineering Technology
Industrial Engineering Technology
Management Engineering Technology
Manufacturing Processes Technology
Mechanical Engineering Technology
Mechanical Design Engineering Technology
Welding Engineering Technology

Send letter and résumé giving details of teaching experience, industrial background, and formal education to:

Claire Bowles
Personnel Director
Wentworth Institute of Technology
550 Huntington Avenue
Boston, Mass. 02115

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

FACULTY POSITIONS IN BIOCHEMISTRY

The Department of Biochemistry of The University of Texas Health Science Center at Dallas is seeking qualified applicants for tenure-track faculty positions to be activated after 1 September 1980 at the levels of instructor, assistant professor, or associate professor. Teaching responsibilities include participation in medical biochemistry instruction and in teaching graduate students. Applicants should have postgraduate experience and be capable of developing an independent research program. The department has a preference for persons with research interests in the following areas: eukaryotic transcription and/or translation, polypeptide and protein processing, neurobiochemistry, prostaglandin metabolism and function, molecular endocrinology or nutrition. Please send curriculum vitae, a description of intended research program, and at least two letters of recommendation to: **Search Committee, Department of Biochemistry, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** Equal Opportunity/Affirmative Action Employer, M/F/H.

GEORGIA TECH

FACULTY AND RESEARCH POSITIONS are open in the School of Geophysical Sciences, Georgia Tech. Talented individuals who can be dynamic in teaching and/or research are being sought with demonstrated experience and background in one or more of the following areas: atmospheric chemistry, physical meteorology, dynamic meteorology, and engineering geology. Send résumé to: **C. E. Weaver, Director, School of Geophysical Sciences, Georgia Institute of Technology, Atlanta, Georgia 30332.** Georgia Tech is an Equal Opportunity/Affirmative Action Employer.

THE UNIVERSITY OF TEXAS AT DALLAS FACULTY POSITIONS IN ENVIRONMENTAL SCIENCES

The Environmental Sciences Program at The University of Texas at Dallas invites applicants for two tenure-track assistant/associate professor positions to be filled on or before 7 September 1980. A Ph.D. and demonstrated ability to conduct high-quality research are required. Postdoctoral experience is preferred.

Academic Search Number 224—Aquatic Chemist. Candidates should have a strong background in modern analytical techniques with major interest in problems of pollutant transport and fate in the environment and/or natural systems chemistry.
Academic Search Number 225—Solar Energy Specialist. Candidates should have interests in graduate-level teaching and research in solar energy technology.

Indication of sex and ethnicity for Affirmative Action statistical purposes is requested, but not required. Interested candidates should submit curriculum vitae and three letters of reference by 31 March 1980, to (please respond to appropriate academic search number as listed above):

Academic Search Number
The University of Texas at Dallas
P.O. Box 688
Richardson, Texas 75080

The University of Texas at Dallas is an Affirmative Action/Equal Opportunity Employer.

FLUID MECHANICS AT THE OHIO STATE UNIVERSITY

Postdoctoral research on coherent structures in turbulence, fiber flow systems, and rheology. Send complete information to: **Professor R. S. Brodkey, Department of Chemical Engineering, Ohio State University, 140 West 19 Avenue, Columbus, Ohio 43210.**

Ohio State University is an Equal Opportunity Employer.

UNIVERSITY OF DELAWARE—Two nontenure positions available as **LECTURER** for the 1980-1981 academic year. Teaching responsibilities in general chemistry and possibly physical chemistry. Ph.D. in chemistry required. Background in analytical, physical, or inorganic chemistry preferred. Send curriculum vitae and three teaching recommendations by 7 March 1980 to: **Dr. Conrad Trumbore, Department of Chemistry, University of Delaware, Newark, Del. 19711.** The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.

POSITIONS OPEN

UNIVERSITY OF GUELPH FACULTY POSITION IN MATHEMATICS

University of Guelph, Department of Mathematics and Statistics, tenure-track position to be filled as soon as possible; rank open; teaching and research in applied mathematical sciences, preferably combining expertise in two of operations research; numerical analysis, biomathematics, statistics. Contact: **W. R. Smith, Chairman, Department of Mathematics and Statistics, University of Guelph, Guelph, Ontario, Canada N1G 2W1.** Position subject to final budgetary approval.

OPENING FOR TENURE-TRACK FACULTY MEMBER—GENETICS

The Biology Department of Loyola University of Chicago invites applications for an **assistant professor-level** position in genetics. A Ph.D. is required. Preference will be given to those with research interests in molecular genetics. Research is expected and encouraged. Teaching responsibilities include an undergraduate genetics course, as well as other courses, depending on the candidate's expertise. Curriculum vitae, reprints, future research plans, and three letters of recommendation should be sent to:

Dr. J. Savitz
Biology Department
Loyola University of Chicago
6525 North Sheridan Road
Chicago, Illinois 60626

An Equal Opportunity/Affirmative Action Employer

IMMUNOCHEMIST—IMMUNOBIOLOGIST

Ph.D. or M.D. for new immunotherapeutic cancer project at Baylor College of Medicine. Postdoctoral experience desirable. Please send curriculum vitae and bibliography to: **Box 22, SCIENCE.**

A research associate position available 1 July 1980 for an **IMMUNOLOGIST, PATHOBIOLOGIST, or NUTRITIONIST** to study the effects of trace element nutrition and the immune system. The position involves a cooperative effort between the U.S. Department of Agriculture, Human Nutrition Laboratory, and the University of North Dakota. Candidates should send curriculum vitae and names of three references to: **Tim R. Kramer, Ph.D., Human Nutrition Laboratory, 7166 University Station, Grand Forks, N.D. 58202.**

MAMMALIAN PHYSIOLOGISTS AND BIOPHYSICISTS. Positions open for the 1980-1981 academic year in the areas of cardiovascular physiology, renal physiology, gastrointestinal physiology, endocrinology, reproductive physiology, and respiratory physiology at King Faisal University College of Medicine in Dammam, Saudi Arabia. Ph.D. and/or M.D. and at least 2 years of teaching experience. Salaries are highly competitive and benefits are excellent. Language of instruction is English. Send complete curriculum vitae with telephone numbers and three references to: **Dr. Tawfig Tamimi, Dean, College of Medicine, King Faisal University, c/o Saudi Arabian Educational Mission, 2221 West Loop South, Houston, Texas 77027.**

MEDICINAL CHEMIST. Mercer University School of Pharmacy invites applications for a faculty position as an assistant professor, effective 1 July 1980. The applicant should have a Ph.D. with a major in medicinal chemistry with experience in nuclear chemistry and pharmacology. Send résumé to: **Dr. Stanley H. Pollock, Chairman, Department of Biomedical Sciences, Mercer University School of Pharmacy, 345 Boulevard, NE, Atlanta, Ga. 30312.**

An Equal Opportunity/Affirmative Action Employer

MICROBIAL GENETICIST. The Department of Microbiology and Immunology, School of Medicine, University of Oregon Health Sciences Center (UOHS), has a position for a microbial geneticist at the assistant professor level beginning July 1980. A Ph.D. degree and postdoctoral research experience in genetics are required. Responsibilities will include developing a graduate level course in microbial genetics, giving lectures on bacterial genetics to medical and nursing students, supervising graduate students, and developing a strong research program. Applicants should send curriculum vitae and names of three references by 1 March 1980 to: **Chairman, Search Committee, Department of Microbiology and Immunology, UOHS, Portland, Oregon 97201.**

**VACANT POSITION
DIRECTOR, INSTITUTE FOR
THE MEDICAL HUMANITIES
THE UNIVERSITY OF TEXAS
MEDICAL BRANCH
GALVESTON, TEXAS**

The director is in charge of staff and programs and has the responsibility of designing and promoting the structure and the programs of the Institute and relating them to other elements of the Medical Center.

Candidate should be learned and experienced in the humanities and the social and behavioral sciences, particularly as regards professional training, teaching, and practice, and should be recognized as a person of sound medical understanding and experience. Candidates should show evidence of substantial scholarly accomplishments.

The director must be able to recruit persons of scholarly and pedagogic achievements or promise, attract fellows and graduate students, and guide, assist, stimulate, and support their work. The candidate will be expected to develop and maintain support from internal sources and appropriate state, federal, and foundation sources through local, regional, national, or international agencies, programs, and organizations. The director prepares and manages the Institute's budget and other fiscal matters.

The director must have or be qualified for tenure and full professorship, have sound skills in writing and teaching students in various branches and stages of development throughout the University Medical Center. Commitment to and participation in community, state, and national affairs as they relate to the work and mission of the Institute are vital.

Interested persons should contact: Melvyn H. Schreiber, M.D., Chairman, Medical Humanities Search Committee, P.O. Box 146, Galveston, Texas 77550. University of Texas Medical Branch is an Affirmative Action Employer.

Tumor Radiobiologist

Staff Scientist position is available in a small tumor radiobiology group in the Division of Biology and Medicine, Lawrence Berkeley Laboratory, to study the radiobiology of tumors in animal systems, using the high-energy heavy-charged particle beams available at the BEVALAC. Experience with tissue culture techniques is necessary. Research presently ongoing and to be initiated include studies in cell survival, tumor volume response in mixed high and low-LET beams, effects of hypoxic cell sensitizers, and cellular repair and repopulation studies. Prefer applicable Ph.D.

Send complete curriculum vitae, publication list and names and addresses of three references to Dr. Stanley B. Curtis, c/o Ron Lowder, Personnel Dept., Lawrence Berkeley Laboratory, No. 1 Cyclotron Road, Berkeley, CA 94720.



**LAWRENCE
BERKELEY
LABORATORY**
University of California

An equal opportunity
affirmative action employer, M/F/H.

**KING FAISAL UNIVERSITY
COLLEGE OF MEDICINE
DAMMAN, SAUDI ARABIA
FACULTY POSITIONS OPEN
1980-1981**

The expanding College of Medicine, now in its sixth year, is accepting applications from qualified men and women for the 1980-1981 academic year in:

CHEMISTRY	PATHOLOGY
BIOLOGY	EPIDEMIOLOGY
PHYSICS	MICROBIOLOGY
BIOCHEMISTRY	PARASITOLOGY
ANATOMY	PHARMACOLOGY
PHYSIOLOGY	COMMUNITY MEDICINE

Doctorate or equivalent degree required. Language of instruction is English. Interviews to be held in London, Houston, and Ottawa during February 1980.

Salaries are highly competitive and negotiable; comparable to other Saudi universities.

Benefits include free furnished housing, educational allowances, air tickets to and from Saudi Arabia once each year for a family of four, 60-day paid vacation, and liberal overweight allowance. No Saudi income tax.

Send curriculum vitae with current telephone number and the names and addresses of three references to:

Dr. Tawfig Tamimi
Dean, College of Medicine
King Faisal University
c/o Saudi Arabian
Educational Mission
2221 West Loop South
Houston, Texas 77027

OR
c/o P.O. Box 2
Sunbury-on-Thames
Middlesex TW16 5JP England

PROGRAM DIRECTOR

The NATIONAL SCIENCE FOUNDATION is seeking candidates for the following positions:

Program Director, Ecosystem Studies, Division of Environmental Biology (EMPB 80-18), \$34,713 to \$50,112 per annum. Closing date for accepting applications is 31 March 1980. Appointment is for a 1- or 2-year period and will begin in August 1980. Responsibilities include directing program activities including allocation of resources, establishing overall goals and objectives, evaluating proposals, preparing recommendations for grants and monitoring the progress of funded projects. Candidates should have a Ph.D. or its equivalent in ecology with at least 5 years of research experience.

Program Director, Population Biology and Physiological Ecology, Division of Environmental Biology (EMPB 80-17), \$34,713 to \$45,126 per annum. Closing date for accepting applications is 31 March 1980. Appointment is for a 1- or 2-year period and will begin in August 1980. Responsibilities are the same as shown above. Candidates should have a Ph.D. or its equivalent in population genetics, population ecology and/or physiological ecology with at least 5 years of research experience.

Program Manager, Polar Biology and Medicine, Division of Polar Programs (EMPB 80-12), \$34,713 to \$50,112 per annum. Closing date for accepting applications is 14 March 1980. Appointment is permanent and is available immediately. Responsibilities include program planning, proposal evaluation, administration of research grants and liaison with other federal agencies. Candidates must be able to pass a physical and have a Ph.D. in biology or subdiscipline with at least 5 years of research experience with field implementation of polar research projects.

Salary is negotiable based on qualifications and experience within salary ranges indicated. Positions are excepted from the competitive civil service and have health, life insurance, and leave benefits. Send résumé or SF-171 to: National Science Foundation (announcement number), DPM, 1800 G Street, NW, Washington, D.C. 20550, by closing date indicated. For further information, contact: Catherine Hobek, telephone: 202-643-4124.

An Equal Opportunity Employer

MANAGER, COMPUTING SERVICES

The Alberta Research Council is seeking an experienced computer professional to play a leading role in the utilization of computing technology in scientific research.

Responsibilities will include:

- Managing a central facility consisting of DEC VAX 11/780 serving as host in a distributed network with remote, semi-independent and specialized nodes,
- Co-ordinating overall computing services within Council involving policy development, training, and resource sharing,
- Consulting on computer usage and interacting with external computing centres, and
- Participating in research areas of interest within computing and on interdisciplinary projects with research staff.

Candidates should have significant management experience and preferably a Ph.D. degree in computing science or a related field. Familiarity with time sharing systems, graphics, networks, numerical analysis, and data base management is required.

Salary will be commensurate with experience.

This competition will remain open until a suitable candidate is selected. Please apply in confidence quoting competition number ARC-79 to:

Senior Personnel Officer
Alberta Research Council
9th Floor, 9925-109 Street
Edmonton, Alberta, Canada T5K 2J8

Alberta
RESEARCH COUNCIL



POSITIONS OPEN

MICROBIOLOGIST—Tenure-track position as instructor or assistant professor of biology. Individual must be a microbiologist with training in immunology and virology. Teaching emphasis will be in above specializations and introductory biology. Ph.D. required and research expected. Send curriculum vitae and a statement of teaching and research interests to: **Dr. Gary Lipton, Biology Department, Trenton State College, P.O. Box 940, Trenton, N.J. 08625.**

We are continuing our search for a **MOLECULAR BIOLOGIST and/or MICROBIOLOGIST** with a demonstrated interest in environmental studies. Tenure-track position at the assistant professor level commencing August 1980. Ph.D. required. Applicants should be committed to quality instruction at the undergraduate and graduate levels and will be expected to teach cell biology, participate in microbiology, and develop a course in area of specialty. An active research program is expected. Applications should be received by 3 March 1980 and include a résumé, transcripts, and three letters of reference. Send applications to:

**Chairman, Search Committee
Department of Biological Sciences
Murray State University
Murray, Ky. 42071**

Murray State University is an Equal Opportunity/Affirmative Action Employer.

University of Alberta Department of Genetics MOLECULAR GENETICIST

The Department of Genetics, University of Alberta, invites applications for a tenure-track appointment at the assistant professor level. The successful candidate will be expected to develop an active research programme using molecular approaches to genetic problems in either eukaryotes or prokaryotes. The appointee will participate in undergraduate and graduate teaching. Applicants are asked to submit curriculum vitae, publication list, and the names and addresses of three referees before 15 March 1980. In addition, applicants are asked to arrange for these referees to send confidential assessments to: **R. C. von Borstel, Department of Genetics, University of Alberta, Edmonton, Alberta, Canada T6G 2E9.** *The University of Alberta is an Equal Opportunity Employer.*

NEUROBIOLOGY. Two salaried 3-year postdoctoral fellowships are available for: (i) **biochemist/pharmacologist** interested in studying cyclic nucleotides/protein phosphorylation in identified molluscan neurons, and (ii) **electron microscopist** interested in applying immunohistochemical methods to the brain using available antisera. Curriculum vitae and names of three references to: **Dr. I. Levitan (i), or Dr. A. Matus (ii) Friedrich Miescher-Institut, POB 273, CH-4002 Basel, Switzerland.**

NEUROCHEMISTRY

POSTDOCTORAL FELLOWSHIPS for Ph.D.'s and M.D.'s are immediately available at the Missouri Institute of Psychiatry (MIP), Saint Louis, Missouri. Special research emphases are available in these areas: structure, metabolism, and function of the complex carbohydrates; protein methylation; protein phosphorylation; neuroactive peptides and receptor function; lipoprotein metabolism in morphine and alcoholic rats; cell and tissue culture methodology; membrane assembly and function; isolation and characterization of subcellular structures; neurochemistry of aging. Opportunities for clinical research projects are available. MIP is a St. Louis segment of the University of Missouri-Columbia, School of Medicine, with faculty members holding academic appointments in the Department of Biochemistry. For further information, applicants should telephone: **314-644-8844 or 314-644-8789**, or send a résumé and a brief description of their objectives as a postdoctoral fellow to:

**OFFICE OF GRADUATE EDUCATION
Missouri Institute of Psychiatry
5400 Arsenal Street
St. Louis, Mo. 63139**

M.D. or Ph.D. **PEDIATRIC BIOCHEMIST**, assistant professor level, needed for a Brown University affiliated hospital. Postdoctoral training in pediatric chemistry with minimum of 2 years of experience in a university setting preferred with special interest in metabolic diseases. Submit curriculum vitae to: **Horace F. Martin, M.D., Ph.D., Chairman, Search Committee, Director, Clinical Chemistry, Rhode Island Hospital, Providence, R.I. 02902.** Deadline: 30 March 1980.

POSITIONS OPEN

PATHOLOGIST—ACADEMIC POSITION. The Department of Pathology, University of South Carolina School of Medicine, invites application for appointment at the level of assistant professor. Applicants must have M.D. degree and Board-qualification or -certification is desirable. The position involves teaching medical students and establishing an active research program. Send replies and curriculum vitae to: **Dr. J. B. Caulfield, Chairman, Department of Pathology, University of South Carolina, Columbia, S.C. 29208.** *An Affirmative Action/Equal Opportunity Employer.*

PHARMACOLOGY. The University of Arizona College of Medicine is recruiting to fill a tenure-track position as assistant professor in the Department of Pharmacology in spring or summer 1980. Applications are invited from well-qualified pharmacologists who possess the Ph.D. or M.D. degree, relevant postdoctoral experience, and a commitment to quality research and teaching in pharmacology. Research interest in neuropharmacology, including application of electrophysiological techniques to studies of brain and spinal cord, is desirable. Send curriculum vitae, list of publications, and names of at least three references to: **Dr. Thomas E. Burks, Ph.D., Head, Department of Pharmacology, The University of Arizona Health Sciences Center, Tucson, Arizona 85724.** *Equal Opportunity/Affirmative Action Employer.*

PLANT ECOLOGIST. A temporary position for a plant ecologist at the level of assistant professor (minimum salary: \$15,000) is anticipated in the Department of Botany starting 1 September 1980. The candidate will participate in undergraduate general ecology, general biology, and plant ecology courses. A Ph.D. is required and preference will be given to candidates with previous teaching experience. Applicants should send curriculum vitae and arrange to have three letters of reference sent by 15 March 1980 to: **Dr. A. G. van der Valk, Department of Botany, Iowa State University, Ames, Iowa 50011.** *An Equal Opportunity Employer.*

POSTDOCTORAL BIOCHEMICAL MICROCALORIMETRY OF ENZYMIC REACTION.

**H. D. Brown
Room 106
Cook Administration
Rutgers University
New Brunswick, N.J. 08903**

POSTDOCTORAL IN PLANT BIOLOGY

Research split between: (i) spatial distribution of growth variables in roots and leaves (such as strain rates, water potential, turgor pressure, and local production rates), and (ii) growth and assimilation of cotton as affected by water stress in the field.

Requires Ph.D. with strong background in physiology and quantitative analysis of biological phenomena. Experience in water relations and microscopic techniques helpful.

Résumé and names of three references to: **T. C. Hsiao, LAWR, University of California, Davis, Calif. 95616.** Closing date: 15 March.

Two **POSTDOCTORAL ASSOCIATES**, having interest and background in molecular biology of gene expression and neoplastic transformation, are needed for an ongoing research program on hormone-mediated specific gene action during normal and neoplastic development of murine mammary gland in vitro. Salary: \$10,000 to \$12,000. Curriculum vitae with names of references should be sent by 28 February to: **Dr. M. R. Banerjee, Tumor Biology Laboratory, School of Life Sciences, 201 Lyman Hall, The University of Nebraska-Lincoln, Lincoln, Nebraska 68588.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW. Position available September 1980 for research at Louisiana State University Medical Center, New Orleans, in cell biology with focus on cell differentiation and proliferation. Seeking Ph.D. with background in electron microscopy to work on ultrastructural cytochemistry of isolated and cultured myocytes. Well-equipped facilities, opportunity for some lecture experience, travel to annual meeting. Ongoing NIH Training Program with Distinguished Lecture Series. Send curriculum vitae, transcripts, and three letters of recommendation to: **Dr. Frederick H. Kasten, Visiting Professor of Anatomy, East Tennessee State University, College of Medicine, Johnson City, Tenn. 37601.** Telephone: **615-928-6426.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL AND LECTURER POSITIONS.

The Department of Developmental and Cell Biology, University of California, Irvine, anticipates having several postdoctoral and lecturer positions available for the 1980-1981 academic year. The postdoctoral positions and faculty advisers are as follows: activity physiology and energy metabolism (A. Bennett); biochemical genetics of neurospora (R. Davis); tissue, cell, and protoplast culture of taro (J. Arditti); laser microbeam studies on cells (M. W. Berns); and pattern formation, determination, morphogenesis, and stem cell differentiation (H. Bode, S. Bryant, and P. Bryant).

Other positions in the area of carcinogenesis are also anticipated. Several 1-year lecturer positions are anticipated in the following areas: evolution and genetics, physiology, developmental and cell biology, and plant and animal diversity. Individuals interested in any of the above listed positions should contact:

**Michael W. Berns, Chair
Developmental and Cell Biology
University of California, Irvine
Irvine, Calif. 92717**

The University of California, Irvine, is an Affirmative Action Employer. All qualified candidates welcome; minorities and women encouraged to apply.

NIH POSTDOCTORAL FELLOW. Position available 1 July 1980. Basic research in aspects of immunologic and pharmacologic hypersensitive response. Applicant must be a U.S. citizen or permanent resident. Send curriculum vitae, bibliography, and three references to: **John E. Salvaggio, M.D., Tulane Medical Center, 1700 Perdido Street, New Orleans, Louisiana 70112.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION. Available 1 July 1980 to study ocular secretory IgA mechanisms in humans and animals. Desirable that applicant has background in secretory IgA immunobiology with emphasis on immunization procedures to elicit secretory IgA, measurement of secretory IgA antibody, and immunofluorescence localization of secretory component and various immunoglobulins. Fellowship is for 2 years in the Department of Ophthalmology, Harvard Medical School, and the Department of Cornea Research, Eye Research Institute of Retina Foundation. Send curriculum vitae and three letters of recommendation to: **Mathea R. Allansmith, M.D., 20 Stanford Street, Boston, Mass. 02114.**

POSTDOCTORAL POSITION IN ANATOMY—Medical school full-time research associate to develop collaborative biomedical research program in neuroendocrinology, specifically in the adrenal or reproductive system. Salary negotiable depending on qualifications and experience; available 1 June 1980. Send résumé and three letters of recommendation to: **Dr. P. G. Iatridis, Assistant Dean and Director, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, Indiana 46408.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION immediately available for 1 to 2 years for study of mechanisms of immunosuppression in tumor-bearing hosts. Experience desired in methods of cell separation, tissue culture, and biochemical procedures of purification and characterization of biologically active factors. Competitive salary. Send résumé to: **Dr. H. F. Havas, Professor, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN MOLECULAR ENDOCRINOLOGY available immediately for studies in glucocorticoid receptor purification, structure, and function. Experience in physical biochemistry and/or steroid receptors helpful. Applicants should write to: **Dr. John A. Cidlowski, Department of Biochemistry, University of Vermont College of Medicine, Burlington, Vermont 05405.**

POSTDOCTORAL POSITION, immediately, for individual trained in neurophysiology or physiological psychology. Participate in a project of developmental study of behavior and conditioning and/or study of CNS concomitants of aversively motivated behavior. Reply immediately to: **S. Soltysik, University of California, Los Angeles, Mental Retardation Research Center, NPI 58-242, 760 Westwood Plaza, Los Angeles, Calif. 90024; telephone 213-825-0453.** *An Affirmative Action/Equal Opportunity Employer.*

BIOCHEMIST

NEW DRUG DEVELOPMENT

Ortho Pharmaceutical Corporation, a Johnson & Johnson, Company, has an opportunity available for an individual interested in joining a progressive expanding research laboratory.

Successful candidate will have a PhD in Biochemistry and preferably 2 years pharmaceutical industrial experience of post grad training. Knowledge of radio immunoassay, receptor binding, enzymology and protein purification desirable.

Position includes responsibility for the development and execution of inviro and invitro biochemical assays to evaluate compounds for their mechanism of drug action and their utility as therapeutic agents.

Ortho is located in central New Jersey and offers competitive salary, bonus, benefits package. Coupled with a growth environment that provides opportunities for advancement and personal development.

Send resume to R.T. Elliott
Manager—Selection



**ORTHO
PHARMACEUTICAL
CORPORATION**

Route 202, Raritan, New Jersey 08869

(A Johnson & Johnson Company)

an equal opportunity employer M/F

Pharmacokinetics Ph.D./M.S.

A challenging position is available for the individual experienced in a discipline directly involved with pharmacokinetics. This position is at the scientist or senior scientist level commensurate with the particular qualifications and experience presented.

We offer a competitive salary and benefits package including profit sharing.

Please submit résumé, including salary requirements, in confidence, to: **Personnel Manager, Research Administration, Schering-Plough Research Center, 60 Orange Street, Bloomfield, New Jersey 07003.**



Schering-Plough

We Are An Equal Opportunity Employer M/F

PhD/DVM ANIMAL NUTRITIONIST

SmithKline Corporation,
a world leader in the health
care field, is seeking
a Nutritionist for its Animal Health Products
research facility located in suburban Philadelphia.

Specifications include:

- **PhD or DVM in Nutritional Physiology or Nutritional Biochemistry required. Training emphasis in swine and poultry is desired.**
- **Research experience in amino acid absorption and metabolism in swine and poultry required.**
- **Training and experience in least cost formulation in swine and poultry rations desired.**
- **Experience in computer assisted analysis of nutritional substances desired.**
- **Candidates with supervisory experience preferred.**

The successful candidate will be involved in our Nutritional Research Program. The candidate will develop and operate models that describe nutrients utilization and efficiency in the swine gastrointestinal track and will supervise technical personnel involved in this function. The candidate will also coordinate development of automated procedures for handling amino acid analysis with data processing via on-line computer systems. Other general activities include development and planning of experimental activities and processing, statistical interpretation and reporting out of findings.

SmithKline offers an excellent compensation program and opportunity for professional growth. Please send resume with salary history to: William G. Groves, Senior Employment Administrator, SMITHKLINE ANIMAL HEALTH PRODUCTS, a division of SmithKline Corporation, 1568 Spring Garden Street, P.O. Box 7929, Philadelphia, Pennsylvania 19101.

We are an equal
opportunity employer,
Male/Female/
Handicapped/Veteran.

SmithKline
ANIMAL HEALTH PRODUCTS

POSITIONS OPEN

POSTDOCTORAL POSITION IN TUMOR IMMUNOLOGY—Immediately available for Ph.D. in immunology, biochemistry, or related area for studies in immunobiology of cancer metastasis. Studies of immune responsive cell effects with different malignant cell lines, including comparative cell surface biochemistry and cell-cell interactions. Experience in tissue culture, histology, cytochemistry, and work with small animals helpful. Send curriculum vitae, bibliography, and names of three references to: Professor P. G. Iatridis, Assistant Dean and Director, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, Indiana 46408. Indiana University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION (research associate II) available in June 1980. Individual will conduct research on the mode of action of selenium in pancreatic function using chicks and small mammals. This work will involve isolation and characterization of selenoproteins from pancreas. Salary: \$13,000 per annum, minimum. Send curriculum vitae and have two letters of reference sent to: Dr. G. F. Combs, Jr., Department of Poultry Science, Cornell University, Ithaca, New York 14853. Cornell University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, and the handicapped are encouraged to apply. Deadline: 15 May 1980.

POSTDOCTORAL POSITION available immediately to study the intracellular location, transcription, and translation of genes coding for the structural proteins of chloroplast ribosomes. Candidate must have Ph.D. in molecular biology or biochemistry and experience in current techniques in molecular biology of nucleic acids and proteins. In particular, experience in recombinant DNA methods and expression of cloned genes is desirable. Salary competitive. Please send curriculum vitae and references by 15 March to: Dr. Don P. Bourque, Department of Biochemistry, 309 Agricultural Sciences Building, University of Arizona, Tucson, Arizona 85721. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS

Postdoctoral trainee (NIH) and research associate positions (NIH grants), Department of Microbiology, University of Tennessee (UT), Knoxville, and interacting departments and institutions in the area. Areas of interest (at UT—Microbiology) include viral immunology (togaviruses and also herpesviruses), immunology of tumors; structure and function of herpesviruses; membrane structure and transport; molecular genetics of lysogeny; plasmids and gene expression; microbial ecology; coronavirus replication and structure; other areas of interest in interacting departments are immunochemistry, liposomes, nucleic acids, and so forth. Position available immediately, and October to January 1980-1981. Contact: A. Brown, Head, Department of Microbiology, University of Tennessee, Knoxville, Tenn. 37916. An Equal Opportunity Employer.

POSTDOCTORAL POSITION—NEUROPHYSIOLOGY available 1 July 1980 for 9 months. Additional year contingent upon funds. For research on crustacean command neurons including chronic recording in behaving animals, intracellular network analysis, Lucifer filing. Starting salary: \$1100 per month. Send curriculum vitae and three letters of reference to: Dr. J. L. Larimer, Department of Zoology, University of Texas, Austin, Texas 78712. An Equal Opportunity Employer.

POSTDOCTORAL POSITIONS—Interdisciplinary training program in nutrition-behavioral science supported by a grant from the National Heart, Lung, and Blood Institute is to begin 1 July 1980. Traineeships are available for individuals with a doctoral degree in nutrition, psychology, or related biomedical, behavioral, and social sciences. Address inquiries to: Dr. Ruth Brennan, Department of Preventive Medicine, Washington University School of Medicine, St. Louis, Mo. 63110.

Two POSTDOCTORAL RESEARCH APPOINTMENTS are available in the areas of prostaglandin biosynthesis and chemical carcinogenesis. Ongoing projects employ biosynthesis, radiochemical synthesis, enzyme purification, mechanistic studies of enzymic and nonenzymic oxygenations, and in vitro and in vivo metabolism. Salary will be competitive and starting date is flexible. Interested individuals should send curriculum vitae and two letters of recommendation to: Dr. Lawrence J. Marnett, 435 Chemistry, Wayne State University, Detroit, Michigan 48202. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available 1 June 1980 in tumor immunology. Research on mechanisms involved in establishment and maintenance of tumor dormant states in murine models. Project involves tumor-suppressive effector systems, mechanisms of escape from lysis, and cytotoxicity of dormant tumor cells. Salary supported by NCI grants at levels commensurate with experience. Please send curriculum vitae and letters of reference to: Dr. E. Frederick Wheelock, Department of Microbiology, Thomas Jefferson University, Philadelphia, Pa. 19107. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to begin fall 1980 for Ph.D. in biochemistry, molecular biology, genetics, or microbiology. The major objective of the project is to determine how two nonlinked regulatory genes (one a negative regulator, the other a positive regulator) coordinately control the inducibility of five structural genes in the yeast galactose pathway. The work will involve genetic analysis, recombinant DNA techniques, and protein purification. Send curriculum vitae, statement of research interest, and the names, addresses, and telephone numbers of three references to: Dr. James E. Hopper, Department of Biological Chemistry, The Milton S. Ebersole Medical Center, Pennsylvania State University, Hershey, Pa. 17033.

POSTDOCTORAL POSITIONS IN CARDIOVASCULAR SCIENCE. Focus of multidisciplinary research program is on control and exchange in the peripheral circulation. Investigators in basic medical sciences, engineering and veterinary medicine provide expertise and facilities in the following areas: (i) classical macroscopic analysis of flow control and transcapillary exchanges in whole organs; (ii) quantitative intravital microscopy for microcirculation studies, (iii) quantitative histochemical and ultrastructural analyses of microvessels, (iv) digital analysis of video images, and (v) computer simulation of microcirculatory phenomena. Send curriculum vitae, statement of research interests, and names of three references to: Dr. Harris J. Granger, Department of Medical Physiology, College of Medicine, Texas A & M University, College Station, Texas 77843. Texas A & M University is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE position available for studies on the molecular biology of normal and abnormal human hemoglobin synthesis. Ph.D. in biochemistry with experience in nucleic acid cloning and sequencing desirable. Send names of three references to: Dr. R. F. Rieder, State University of New York—Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, New York 11203. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL TRAINING position in sleep disorders, Rush-Presbyterian-St. Luke's Medical Center, Chicago, Ill., available September 1980 for 1 year, renewable for a second year. Training in research and clinical work with patients presenting to Sleep Disorder Service and Research Center. Ongoing studies on depression, sleep apnea, and non-restorative sleep. Send curriculum vitae to: Dr. Rosalind Cartwright, Department of Psychology and Social Sciences, Rush-Presbyterian-St. Luke's Medical Center, 1753 West Congress Parkway, Chicago, Ill. 60612.

Equal Opportunity/Affirmative Action Employer

PRESIDENT PENNSYLVANIA HORTICULTURAL SOCIETY

The presidency of the Pennsylvania Horticultural Society provides an unusual and rewarding opportunity for a person with a proven record of administrative and financial management and with a professional or amateur background in horticulture. The person selected will administer and operate a 7000-member society, a \$1.5-million annual budget, and a staff of 25. It relies on the active support of more than 1000 volunteers.

It is known for its production and management of the Philadelphia Flower Show, for publishing a bi-monthly magazine, for operating a circulating library, and for conducting extensive urban outreach programs.

The salary is competitive. The Society is an Equal Opportunity Employer.

Nominations and recommendations should be sent to:

Presidential Services Division
Academy for Educational Development
680 Fifth Avenue
New York, New York 10019

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position available 1 March 1980 for research on epididymal physiology. Study factors regulating functions of cultured principal cells and differences in functions of principal cells from different regions of the epididymis. Experience in cell culture, EM radioautography, immunoelectrophoresis, affinity chromatography, and reproductive biology will be considered. Salary: \$13,500. Résumé and names of three references to: Dr. R. P. Amann, Animal Reproduction Laboratory, Department of Physiology and Biophysics, Colorado State University, Fort Collins, Colo. 80523. Applications considered until position filled. Colorado State University is an Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

DEPARTMENT OF PREVENTIVE MEDICINE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Searching for **PROFESSOR AND HEAD** of Department of Preventive Medicine at Washington University School of Medicine, St. Louis, Missouri. Interest in epidemiology and research accomplishments are particularly important. If interested, please send curriculum vitae and complete bibliography to:

M. Kenton King, Dean
Washington University School of Medicine
660 South Euclid Avenue—Box 8106
St. Louis, Missouri 63110
Equal Opportunity Employer

DEPARTMENT OF ANATOMY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Searching for **PROFESSOR AND HEAD** of Department of Anatomy at Washington University School of Medicine, St. Louis, Missouri. Research accomplishments particularly important. If interested, please send curriculum vitae and complete bibliography to:

M. Kenton King, Dean
Washington University School of Medicine
660 South Euclid Avenue—Box 8106
St. Louis, Missouri 63110
Equal Opportunity Employer

DEPARTMENT OF SURGERY WASHINGTON UNIVERSITY SCHOOL OF MEDICINE (BARNES HOSPITAL, ST. LOUIS)

Searching for **PROFESSOR AND HEAD** of Department of Surgery at Washington University School of Medicine and Surgeon-in-Chief at Barnes Hospital, St. Louis, Missouri. Surgical leadership ability and research accomplishments are particularly important. If interested please send curriculum vitae and complete bibliography to:

M. Kenton King, Dean
Washington University School of Medicine
660 South Euclid Avenue—Box 8106
St. Louis, Missouri 63110
Equal Opportunity Employer

PROJECT DIRECTOR TRAINING AND EDUCATIONAL INFORMATION DATA SERVICE STATE OF INDIANA

Under a 3-year grant, project director will have overall responsibility for design and testing of a self-supporting, computer-based information system that will provide educational and training data to 1000 agencies and organizations in Indiana that counsel adults.

Candidate should demonstrate substantive knowledge and experience in information systems and definite capability for entrepreneurial leadership. Salary competitive with private sector opportunities.

Submit résumés to: A. Michelle Taylor, Director of Federal Programs, Commission for Higher Education, 143 West Market Street, Indianapolis, Indiana 46204, by 1 March 1980.

Equal Opportunity Employer

RESEARCH ASSOCIATE—postdoctoral—grant-supported brain lipid metabolism project. Ph.D. in biochemistry or related field. Experience in lipid metabolism, enzyme analysis, and brain subcellular fractionation is desirable. Salary to \$16,000, depending on experience. Send résumé with two references to: Personnel, Position Number 130, Institute for Basic Research in Mental Retardation, 1050 Forest Mill Road, Staten Island, N.Y. 10314. Affirmative Action/Equal Opportunity Employer.

FERMENTATION LAB MANAGER in PARIS

A leading French Group in the Agrifood Business is opening a laboratory near Paris for the study of fermentation and its application.

The person we seek will supervise two research units which will have to fulfill four functions: collection, study, selection and adaptation of ferments to specific industrial purposes. Heading a staff of 5 to 8 scientists, the Lab Manager will define, propose and implement the steps necessary to carry out these four functions.

Probably a Ph.D. graduate, he should be a specialist in molecular biology, applied to genetics, or a specialist in genetic engineering, with five years recent experience in a research laboratory or the research department of an industrial company. He will know how to apply research to industrial purposes and will be capable of negotiating contracts with industry.

This new position offers outstanding opportunities in the R & D Department of this dynamic group and an attractive salary is offered.

For consideration, forward your resume in confidence to:

Box 32, SCIENCE

WELLCOME INSTITUTE FOR THE HISTORY OF MEDICINE DIRECTOR

The Wellcome Institute for the History of Medicine, which houses the foremost library in the world in this field, is a centre for research and postgraduate training in the history of medicine and associated sciences, closely linked through its Academic Unit with University College London. It also has a continuing association with the Science Museum through its extensive and important museum holdings, now transferred on indefinite loan to the Science Museum. In addition to the postgraduate research and teaching activities of its own staff, it contributes to undergraduate teaching through its link with University College London, it makes provision for visiting scholars, and grants are available to support research projects from the Wellcome Trust, whose Trustees are responsible for the entire funding of the Institute.

The Trustees invite applications for the post of Director. The person appointed will be responsible both for the academic activities of the Institute and for its administrative management, and will be expected to develop the Institute as a leading centre of research and teaching of the history of medicine and the medical sciences. The successful applicant will be a medical historian of international distinction in research, who should have shown evidence of ability to attract new talent to the field, form close associations with the medical profession, and be able to lead and administer an institution of this type.

The appointment will be made in association with University College London, and the person appointed will be eligible for honorary academic status. The salary will be on the university professorial scale, plus a responsibility allowance, and will be subject to negotiation.

All enquiries and applications, which should include a curriculum vitae and the names of two referees, should be addressed to:

The Director
The Wellcome Trust,
1 Park Square West,
LONDON. NW1 4LJ

Completed applications must be received by 28th March 1980.

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Opening Date: February 4, 1980

Closing Date: February 19, 1980

(All applications must be postmarked by closing date)

DIRECTOR, MICROBIOLOGY AND INFECTIOUS DISEASES PROGRAM

The National Institute of Allergy and Infectious Diseases expects to appoint a permanent Director of its Microbiology and Infectious Diseases Program. This Director is responsible for the development and operation of extramural programs (grants and contracts) in infectious diseases and related disciplinary areas of basic science.

This is a Civil Service position in the Senior Executive Service with salary from \$47,889 to \$50,112 per year depending on qualifications. (Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service). The SES individual selected, if not presently in the Senior Executive Service must serve a one-year probationary period. Mandatory professional/technical qualifications are: a Doctor of Medicine together with research experience in an area related to infectious diseases. In addition, candidates must meet the following mandatory managerial/executive qualifications: experience necessary to select, manage, and motivate a staff and carry out organizational goals, including the ability to implement EEO objectives, and administrative leadership experience in the

management and leadership of a science program. Candidates who meet the mandatory qualifications will be further evaluated by the Search Committee on the following factors: scientific reputation/peer recognition, research experience and leadership, honors and awards, training and education, and the extent to which they exceed the level of mandatory managerial/executive qualifications specified above.

Applications (Personal Statement of Qualification—SF-171) are to be sent to the Chairperson, Search Committee, National Institute of Allergy and Infectious Diseases, NATIONAL INSTITUTES OF HEALTH, Building 31, Room 7A-33, 9000 Rockville Pike, Bethesda, MD 20205. A current curriculum vitae, bibliography and performance information must accompany all applications.

Applications of women and/or minority group members are especially solicited.

The National Institutes of Health is an equal opportunity employer.

NATIONAL INSTITUTES OF HEALTH

POSITIONS OPEN

FULL PROFESSOR OF CHEMISTRY, Arizona State University (ASU). Person with demonstrated history of excellence in research, to bring ASU an established program using ion microprobe or related techniques. Should complement and interact with existing strengths, including geochemistry and solid state science. Apply by 1 May 1980 to: **A. Navrotsky, Chair, Search Committee, Department of Chemistry, ASU, Tempe, Ariz. 85281. Telephone: 602-965-4241.**

PROFESSORIAL POSITION. Applicants with D.V.M. and/or Ph.D. in experimental pathology will be considered. Experience in research and teaching is required and certification in a specialty area related to pathology is desirable. This is a regular faculty position with emphasis on developing a strong research program in experimental pathology. Participation in the teaching, continuing education, and service responsibilities of the department is expected. Rank will be at assistant or associate professor level depending on background experience. Send curriculum vitae and names of three references to: **Dr. A. A. Bickford, Department of Veterinary Pathology, College of Veterinary Medicine, University of Missouri-Columbia, Columbia, Missouri 65211. An Affirmative Action/Equal Opportunity Employer.** Closing date: 29 February 1980.

NATIONAL SCIENCE FOUNDATION (NSF) PROGRAM ASSOCIATE

NSF is considering Intergovernmental Personnel Act (IGPA) nominations from universities and local governments for a program associate position in the Division of Science Education Resources Improvement, Instructional Scientific Equipment Program and Local Course Improvement Program. The assignment is for 1 to 2 years, starting August 1980. The ISEP program facilitates new or improved undergraduate instructional programs by providing grants to colleges and universities to purchase scientific instructional equipment, while the LOCI program focuses on undergraduate science course improvement in these institutions. The program associate's responsibilities consist of participation in activities and special projects designed to provide experience with the environment in which the foundation operates that will improve his or her future capabilities as a staff member of the home institution. Applicants should have a Ph.D. or its equivalent in science, preferably in a social sciences field, and at least 5 years of recent teaching experience at a college or university. Prior experience as an NSF science education proposal reviewer or participation in an ISEP or LOCI grant is desirable but not necessary. The individual selected for the assignment will remain an employee of his or her institution which may be reimbursed by NSF for a portion of their salaries and other costs related to the assignment. **HOW TO APPLY:** Nominations should be forwarded along with curriculum vitae to: **Robert Preston, National Science Foundation, DPM, 1800 G Street, NW, Washington, D.C. 20550.** For further information, telephone: 202-632-4118. Deadline for submission is 7 March 1980.

RADIOPHARMACIST

The School of Pharmacy at the University of Maryland is seeking an experienced radiopharmacist to supervise its central nuclear pharmacy program. The position will involve administration of its central nuclear pharmacy, teaching at the undergraduate and graduate levels, and research in radiopharmaceutical development. Salary and academic rank will be commensurate with experience. Please reply with curriculum vitae and three letters of recommendation to: **Larry A. Spitznagle, Ph.D., Department of Medicinal Chemistry and Pharmacognosy, University of Maryland, School of Pharmacy, 636 West Lombard Street, Baltimore, Md. 21201. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE position available in the study of neuropharmacological and behavioral aspects of alcoholism. Doctorates from any of the neurosciences with a strong interest in experimental models of alcoholism are invited to send curriculum vitae and names of references to: **Dr. R. Thomas Gentry, The Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.**

RESEARCH ASSOCIATE: peptide synthesis and conformational analysis. Bachelor's degree in chemistry or related field plus 2 years of experience in research including background in synthetic organic chemistry. Send résumé and two letters of recommendation by 21 March 1980 to: **Dr. Lila Pease, Department of Chemistry, University of Delaware, Newark, Del. 19711. University of Delaware is an Equal Opportunity Employer and encourages applications from qualified minority groups and women.**

POSITIONS OPEN

PUBLIC HEALTH

The Board of Toxicology and Environmental Health Hazards is seeking a senior professional in public health, preferably with expertise in chronic disease epidemiology. The individual will be responsible for the development and implementation of a broad program aimed at the assessment of scientific data to determine risks to human health and to investigate mechanisms for determining priorities among chemical and physical risks. The individual would develop areas of evaluative investigations, determine technical approaches, and work with a committee to provide expert judgmental analysis for the resolution of scientific problems. A Ph.D. or equivalent in epidemiology or related biomedical area with demonstrated ability to conceptualize problems on broad scientific issues and effective communication skills required.

Applicants should submit curriculum vitae to: **Dr. Robert G. Tardiff, Executive Director, Board on Toxicology and Environmental Health Hazards, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418. An Equal Opportunity Employer.**

RESEARCH ASSISTANT PROFESSOR position (Ph.D.) available immediately for 3 years with research group at Vanderbilt to study transmembrane coupling of mitogenic peptides (EGF). Experience with isolation and immunocytochemical localization of microfilaments or cyclic nucleotides and membrane phosphorylation desired. Salary range: \$12,500 to \$20,000, depending upon experience. Send curriculum vitae and two references to: **Lloyd E. King, Jr., M.D., Ph.D., Dermatology Research, Vanderbilt University School of Medicine, Nashville, Tenn. 37232.**

RESEARCH ASSOCIATE position available July 1 1980 for Ph.D. pharmacologist with 2 to 3 years of postdoctoral training to investigate the effects of environmental pollutants on arachidonic acid metabolism. Candidate must have publications in this research area. Salary: \$17,000 to \$21,000. Respond with curriculum vitae and three references to: **Dr. David Newcombe, Director, Program of Environmental Health Biology, Department of Environmental Health Sciences, Johns Hopkins University, School of Hygiene, 615 North Wolfe Street, Baltimore, Md. 21205. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE—Ph.D. or M.D.: Ph.D. training should be in molecular biology, physiology, biochemistry, or microbiology. To study electrolyte and nonelectrolyte transport in isolated and reconstituted intestinal and renal luminal and contraluminal membranes. Two years of experience preferred. Available immediately. Salary: \$12,000. Apply to: **Dr. R. G. Faust, Department of Physiology, University of North Carolina School of Medicine, Chapel Hill, N.C. 27514. Affirmative Action/Equal Opportunity Employer.**

SCIENCE AND PUBLIC POLICY FACULTY POSITIONS

The University of Oklahoma plans to appoint an assistant or associate professor to a joint faculty position in the University's multidisciplinary Science and Public Policy Program and in an appropriate department: physics, chemistry, or a pertinent field of engineering. Candidates should hold a Ph.D. in a physical science or engineering field relevant to ongoing studies of energy resource development and utilization. In addition, candidates should have an ability and commitment to work as part of an integrated research team comprising engineers, natural scientists, and social scientists, and should be able to write clearly and concisely. Preference will be given to persons with demonstrated aptitude in multidisciplinary programs or relevant experience.

The duties will involve a principal research commitment to Science and Public Policy Program studies, along with complementary teaching and general faculty contributions within the total program of the collaborating academic unit.

Rank and salary will be commensurate with qualifications. The position is available in September 1980, or earlier if mutually agreed upon. Applications must be received by 31 March 1980 to insure consideration in the initial screening. However, recruiting will be continued until the position is filled. Please send résumés, copies of appropriate papers and academic records, and a list of three references (or letters) to: **Michael Devine, Professor of Industrial Engineering and Director, Science and Public Policy Program, 601 Elm, Room 431, University of Oklahoma, Norman, Oklahoma 73019. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

RESEARCH ASSOCIATE: Department of Earth and Planetary Sciences, Massachusetts Institute of Technology (MIT), is seeking an individual with a Ph.D. or equivalent to be responsible for analysis of lunar laser range data, and to design, write, and run computer programs to perform this analysis, using MIT Planetary Ephemeris Program (Fortran) on large computer system. Must be well-versed in scientific programming methods using Fortran in an IBM 360/370 OS/VS environment, especially in program modification, and have a good understanding of lunar orbit and rotation dynamics and kinematics. Grasp of solid-body dissipation mechanism and modeling of the earth helpful. Please send résumé to: **MIT Personnel Office, 400 Main Street, Cambridge, Mass. 02139. Attention: Job Number R80-24. MIT is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH BIOCHEMIST with major background in cell separation is being sought for an expanding interdisciplinary program investigating membrane structure and function. The minimum qualifications are B.S. in biochemistry and 5 years of postgraduate experience either in cell biophysical research or immunospecific cell separation. The candidate should be familiar with electrophoresis, isofocusing, and isotachopheresis of cells and will be expected to develop separation techniques suitable for zero-gravity environments. Salary: \$18,000. Send curriculum vitae, description of research plans, and names of three referees to: **Dr. George Sachs, Director, Laboratory of Membrane Biology, The University of Alabama, Birmingham, Alabama 35294. The University of Alabama is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH DIRECTOR

The Center for Environmental Education, a non-profit organization in Washington, D.C., is seeking a research director. The Center's policy-oriented research program focuses on marine habitat issues which affect whales, sea turtles, and seals.

Responsibilities include identification of key issues, preparation and presentation of position papers, staffing, and research program administration and coordination with other Center programs.

The director is expected to work with other environmental organizations, government agencies, industry, and the academic community.

Required skills include policy analysis, research, writing, and speaking.

Qualifications include Ph.D. or equivalent experience, publications, and knowledge of the policy process and marine affairs.

Please submit statement of interest, résumé, and reprints to: **Thomas Grooms, Executive Director, Center for Environmental Education, 1925 K Street, NW, Washington, D.C. 20006.**

Bryn Mawr College seeks a **SENIOR FACULTY MEMBER** specializing in cell and molecular biology, developmental biology, or neurobiology to teach and supervise research in its Ph.D., M.A., and A.B. programs in biology. The appointee should have a record of publication and outside funding that shows sustained research productivity. Interested persons are urged to write or telephone: **Dr. Robert L. Conner, Department of Biology, Bryn Mawr College, Bryn Mawr, Pa. 19010; telephone: 215-645-5091. Bryn Mawr College is an Affirmative Action/Equal Opportunity Employer.**

TECHNOLOGY AND PUBLIC POLICY

The Department of Engineering and Public Policy of Carnegie Institute of Technology, the Social Science Department of the College of Humanities and Social Science, and the School of Urban and Public Affairs, Carnegie-Mellon University, have one or more joint faculty openings: (i) for applied social scientists interested in doing collaborative policy research with engineers or (ii) for engineers interested in doing collaborative policy research with social scientists. Problem areas of interest include automation and industrial productivity, social impacts of computers and telecommunications, product liability and safety, electric power load management, retrospective technology assessment, arms control and disarmament, and energy and environmental systems. Desirable areas of skill include decision analysis, optimization techniques, organizational analysis, and regulatory process and law. Send résumé with list of publications to:

**Dr. Indira Nair
Department of Engineering and Public Policy
Carnegie-Mellon University
Pittsburgh, Pa. 15213**

CELL BIOLOGIST IN VITRO ANTIBODY RESEARCH

Abbott Laboratories, a recognized leader in research and development for health care needs worldwide, is seeking an individual to head up a laboratory cell biology team in the development and implementation of in vitro antibodies for monoclonal antibody research. Position will involve cell hybridization procedures, cloning of antibody producing cells and eventual production of high titers of monoclonal antibodies for cancer, hepatitis and cardiovascular related antigens.

We seek an individual with a Ph.D. in Biological Sciences coupled with at least 2 years of post-doctoral experience in Cell Biology that included in vitro tissue culture techniques described above. Strong background in immunology and immunochemical techniques with extensive experience in immunoassay methods is also preferred.

In addition to an outstanding professional environment that is conducive to wide ranging career achievement, Abbott provides an excellent salary and full benefits including profit sharing and relocation assistance. For consideration, send a resume with salary history, in complete confidence to:

Chris Gude
Corporate Placement

ABBOTT
NORTH CHICAGO, ILL. 60064

Abbott is an Affirmative Action Employer

Senior Research Endocrinologist

We have an excellent opportunity in our Endocrinology Department for a Ph.D. in endocrinology and/or reproductive physiology with post doctoral experience or equivalent. Activity will be in the area of bioassay/reproductive physiology. Experience with bioassays and primates is desirable.

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One semester, undergraduate **TEACHING POSITION** available, fall 1980. Load: one lecture session and one laboratory section in introductory biology plus one upper-division course of the individual's choice. Total teaching load: 12 contact hours. No committee work; minimal laboratory setup. Ph.D. desirable but applicants from a broad spectrum of professional backgrounds will be considered. Salary and terms contingent upon individual's qualifications and experience. Send résumé in confidence to:

Dr. Tully H. Tury
Box 157
Hampden-Sydney College
Hampden-Sydney, Virginia 23943

WORKSHOP

ANNOUNCEMENT

A two-day workshop on Scale Control in Geothermal Systems, sponsored by the Department of Energy and hosted by the Los Alamos Scientific Laboratory will be held in Los Alamos, New Mexico, on 16 - 17 April 1980. Discussion topics include data and modeling for geothermal plant operation, field and laboratory studies for scale control, instrumentation for plant control and process optimization, and equipment for environmental control. For additional information, contact Roy C. Feber, MS-734, Los Alamos Scientific Laboratory, Box 1663, Los Alamos, NM 87545, (505) 667-4181.

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LOS ALAMOS SCIENTIFIC LABORATORY

GRADUATE STUDY

ENVIRONMENTAL SCIENCE. The School of Public and Environmental Affairs, Indiana University, seeks qualified individuals interested in pursuing a M.S. degree in environmental science. A degree in science, mathematics, or engineering is necessary for admission to the program. Financial support is available to qualified applicants. Internship and placement services are provided. For further information write: **Director, Environmental Programs, SPEA, Room 438B, Indiana University, Bloomington, Ind. 47405.**

TRAINEESHIPS

COMPUTERS IN MEDICINE—One-year National Library of Medicine traineeship for academically oriented physicians and postdoctoral scientists. Starts 1 July 1980. Fundamentals of computer science taught with emphasis on clinical practice and medical research. For brochure, write: **Aran Safir, M.D., Director, Institute of Computer Science, Mount Sinai School of Medicine, 1 Gustave L. Levy Place, New York, N.Y. 10029.**

TRAINING PROGRAMS

The **REPRODUCTIVE BIOLOGY PROGRAM**, Colorado State University (CSU), has openings for postdoctoral (starting date: 1 April) and predoctoral (starting date: 1 June) positions. Training offered in areas of reproductive endocrinology, neuroendocrinology, cell biology, seminal physiology, fertilization, embryo culture, and mechanism of steroid, peptide and protein hormone action. Send curriculum vitae, transcripts, and three letters of recommendation by 15 April to: **Dr. Gordon Niswender, Department of Physiology and Biophysics, Colorado State University, Fort Collins, Colo. 80523.** CSU is an Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

PREDOCTORAL TRAINING PROGRAM IN ANATOMY

The Department of Anatomy, Tufts University Schools of Medicine, Dental Medicine, and Veterinary Medicine, invites applications for its Ph.D. training program. Major research areas include pulmonary cell biology, reproductive biology and neuroendocrinology, comparative immunology, mechanisms of hormone action, cell biology, and the effects of aging and/or alcohol on the CNS. All students admitted to the program receive tuition waivers; stipends may also be available for qualified trainees. Applications should be completed by 15 April for entrance to the program in September 1980.

For application materials write:

Dr. Karen R. Hitchcock, Chairman
Tufts University School of Medicine
136 Harrison Avenue
Boston, Massachusetts 02111

PLANETARY BIOLOGY INTERN PROGRAM Funded by NASA

The Department of Biology at Boston University invites applications from graduate students for awards to carry out research at NASA centers and a number of collaborating universities for 6 to 8 weeks in summer 1980. Studies include development of life-support systems in closed environments; biogenic contributions to stratiform metalliferous deposits and atmospheric gases; origins and maintenance of life in extreme environments; and so on. Interns will be paid the costs of transportation, living expenses, and a stipend of \$100 per week. A research summary is required at the termination of the award. For brochure and application form, contact: **Dr. T. Swain, Department of Biology, Boston University, 2 Cummings Street, Boston Mass. 02215.** An Equal Opportunity/Affirmative Action Institution.

FELLOWSHIPS

PREDOCTORAL FELLOWSHIPS IN PHYSIOLOGY. Training in cardiovascular, cell, endocrine, muscle, neuro-, renal, and respiratory physiology. Applicants must submit GRE scores (verbal, quantitative, and one advanced test). Deadline for applications is 16 April 1980. For application materials, write: **Department of Physiology, West Virginia University Medical Center, Morgantown, W. Va. 26506.**

PREDOCTORAL FELLOWSHIPS. The Graduate Program in Molecular Cell Biology invites applications from highly qualified students interested in an interdisciplinary Ph.D. program. Major areas of emphasis include animal virology, bacterial and somatic cell genetics, cancer biology, cellular immunology and immunochemistry, connective tissue and protein biochemistry, infectious diseases and host defense, membrane biochemistry, nucleic acid synthesis, and research involving the cause and prevention of dental caries. All students admitted to the program receive stipends of \$5,100 plus tuition and fees per year. Contact: **Dr. Roy Curtiss, Co-Director of Graduate Studies, Department of Microbiology, University of Alabama in Birmingham, Medical Center, Birmingham, Alabama 35294.**

GRADUATE FELLOWSHIPS in the neurosciences are available for fall 1980. Stipends are approximately \$5,000 for 12-month appointments. Send letters of inquiry to:

Dr. Vernon Pegg, Director
The Neurosciences Program
The University of Alabama in Birmingham
Birmingham, Alabama 35294

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FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS

Applications are invited for fellowships (1-year, renewable) in the area of alcohol (psychobiology, psychology, sociology). Deadline for applications is 1 April 1980. Send curriculum vitae, three letters of recommendation, and proposed research. For further details, write: **J. A. Deutsch, University of California, San Diego, Department of Psychology, C-009, La Jolla, California 92093.** The University of California is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP. The Eye Research Institute of Retina Foundation, Boston, Mass. 02114, has a position available in its National Research Award Program for ophthalmic studies starting September 1980. Research opportunities exist for studies of corneal wound healing and corneal development with regard to the regulation of proteoglycan synthesis at the enzymatic level. A Ph.D. in biochemistry or cell biology with research experience in enzymology is required. A 2-year commitment and a "pay back" agreement are required by NIH. Applicants should submit curriculum vitae, a brief synopsis of their Ph.D. research, and at least two letters of recommendation by 1 April to: **Dr. Charles Cintron** at the above address. An Equal Opportunity/Affirmative Action Employer, M/F.

GRADUATE FELLOWSHIPS IN PULMONARY BIOLOGY

As a special part of its overall graduate program, the Department of Anatomy at Tufts University School of Medicine is pleased to announce the availability of a pulmonary training program funded by the National Heart, Lung, and Blood Institute of the National Institutes of Health. Two NIH-funded predoctoral fellowships will be available for qualified predoctoral students admitted to the Ph.D. program in the Department of Anatomy at Tufts University School of Medicine beginning September 1980. The program will provide training in biochemical, cellular, and immunological approaches to the lung. The Ph.D. candidates will interact with a group of pulmonary investigators; projects include development of cell and organ culture models for studying lung cell function, in vivo and in vitro studies of the effects of hormones on lung cell function and differentiation, regulation of surfactant synthesis and secretion, studies of bleomycin and oxygen-induced toxicity, measurement of angiotensin-converting enzyme activity in lung, and physiologic, morphologic and biochemical investigation of contractile regulation in pulmonary vascular smooth muscle.

For application materials write:

Dr. Karen R. Hitchcock, Chairman
Tufts University School of Medicine
136 Harrison Avenue
Boston, Massachusetts 02111

POSTDOCTORAL FELLOWSHIP

A position is available in the Ahmanson Laboratory of Neurobiology Brain Research Institute, University of California, Los Angeles (UCLA), starting 1 July 1980. Applications are invited from highly qualified individuals with interests in membrane biophysics, synaptic physiology, sensory physiology, developmental neurobiology, or ultrastructure. These NRSA FELLOWSHIPS are normally held for a 2-year period at a starting salary of \$13,380. U.S. residency is required. Send curriculum vitae and names of three references to: **S. Ciani, UCLA School of Medicine, Jerry Lewis Neuromuscular Research Center, Los Angeles, California 90024.**

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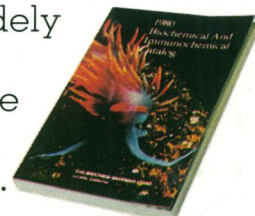
Flabellinopsis iodinea, a Nudibranch (shell-less mollusk) approximately 38 mm in length, photographed off La Jolla, California by James R. Lance, Scripps Institution of Oceanography. The mollusk is the source of β -Glucuronidase listed on page 133 of our catalog.

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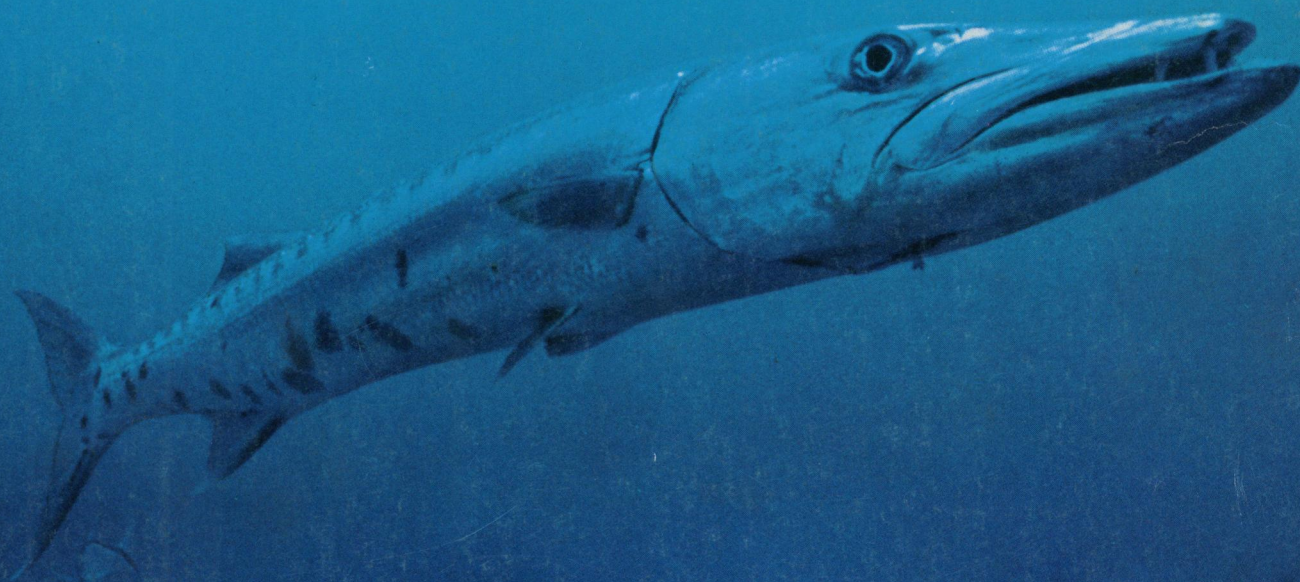
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