

ly to descriptions of flexible species that may undergo conformational transitions and chemical rearrangements. It also seems to be the most fruitful way to think about assemblies in solution, including biopolymers, micelles, and bilayers. These interesting issues are, however, not addressed in the book. Its primary contribution is to present a detailed description of what is known about intermolecular potentials and a discussion of how to express this knowledge in terms of semi-invariants and how to perform reasonably accurate statistical-mechanical calculations, when appropriate, with semi-invariant methods. It is an exhaustive and welcome treatise that will serve as the standard source on this type of approach. Unfortunately, almost nothing is said in the book about methods of computer simulation, and only a cursory description of the atomistic formulations of molecular fluids is presented. In my opinion, it is these methods that will ultimately prove most useful in attacking problems at the new frontiers of liquid state science.

DAVID CHANDLER

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Theoretical Physics

Theoretical Concepts in Physics. An Alternative View of Theoretical Reasoning in Physics for Final-Year Undergraduates. M. S. LONGAIR. Cambridge University Press, New York, 1984. xiv, 366 pp., illus. \$49.50; paper, \$14.95.

It is rare to find a course beyond the introductory level that places an entire field in perspective, so that the instructor may dwell on the subtleties and the power of the important concepts without having to worry about getting bogged down in providing the necessary technical background. M. S. Longair has had an opportunity to put together such a course, and the book under review is the happy by-product. Longair approaches the development of the theoretical concepts of physics by means of seven case studies. These are "The origins of Newton's law of gravitation," "Maxwell's equations," "Mechanics and dynamics," "Thermodynamics and statistical mechanics," "The origins of the concept of quanta," "Special relativity," and "General relativity and cosmology."

The methods of the original papers, albeit in modern notation, are used in the development of each subject. Longair

departs from this procedure, however, in discussing relativity and cosmology, the subjects closest to his own specialty, astrophysics. Here he gives a concise, yet intellectually complete, introduction to each subject, using simple physical, rather than formal mathematical, arguments. At the end of most of the case studies there is an appendix in which either technical background material is provided or interesting applications of the concepts are set forth. Although occasionally containing some clever derivations, the appendixes are somewhat jarring in their interruption of the flow and style of the main narrative.

The author speaks directly to the reader in an informal manner as he traces the difficulties faced by Newton, Maxwell, Planck, Einstein, and others in their work. He occasionally uses the resolution of these difficulties as a basis for offering advice on how to approach problems in physics. He conveys a continuing sense of intellectual excitement and highlights what he considers to be remarkable and miraculous achievements.

Some amusing and little-known topics, such as Kepler's analysis of the orbits of the five innermost planets in terms of properties of the five regular solids and Maxwell's representation of a magnetic field in terms of rotating vortices, are discussed in the early chapters, but these are hard for a modern physicist or physics student to relate to. Of more current interest is the section on thermodynamics and statistical mechanics.

The centerpiece of the presentation, a story that the author obviously takes great delight in retelling, is the development of the early quantum theory by Planck and Einstein as arising from the failure of purely classical concepts to account for the properties of black-body radiation. The discussion here is very complete.

Although almost all of the material in the book can be found elsewhere, it is good to have such a diverse yet unified set of topics discussed in one place. The book will be useful not only in the type of course for which it was designed but also to bright younger students who would like to read up on the exciting parts of physics. It is unfortunate, but understandable, that, with the exception of the discussion of cosmology, Longair did not include problems that have been occupying physicists over the past 60 years. Perhaps he will write a sequel (or, more necessarily, several).

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Books Received

Applied Virology. Edouard Kurstak, Widad Al-Nakib, and Christine Kurstak, Eds. Academic Press, Orlando, Fla., 1984. xxvi, 518 pp., illus. \$59.

Aquatic Oligochaeta. G. Bonomi and C. Erséus, Eds. Junk, Dordrecht, 1984 (U.S. distributor, Kluwer, Hingham, Mass.). xiv, 240 pp., illus. \$68.50. Developments in Hydrobiology 24. Reprinted from *Hydrobiologia*, vol. 115. From a symposium, Pallanza, Italy, Sept. 1982.

Archaeological Geology. George Rapp, Jr., and John A. Gifford, Eds. Yale University Press, New Haven, Conn., 1985. xx, 435 pp., illus. \$35.

The Archaeology, Geology, and Paleobiology of Stanton's Cave. Grand Canyon National Park, Arizona. Robert C. Euler, Ed. Grand Canyon Natural History Association, Grand Canyon, Ariz., 1984. viii, 141 pp., illus. Paper, \$12. Grand Canyon Natural History Association Monograph No. 6.

Archeological Explanation. The Scientific Method in Archeology. Patty Jo Watson, Steven A. LeBlanc, and Charles L. Redman. Columbia University Press, New York, 1984. xvi, 309 pp. \$26.50.

Arithmetic Moduli of Elliptic Curves. Nicholas M. Katz and Barry Mazur. Princeton University Press, Princeton, N.J., 1985. xiv, 514 pp., illus. \$60; paper, \$22.50. *Annals of Mathematics Studies*, No. 108.

Artificial and Human Intelligence. Alick Elithorn and Ranan Banerji, Eds. North-Holland, Amsterdam, 1984 (U.S. distributor, Elsevier, New York). x, 344 pp., illus. \$40. From a symposium, Lyon, France, Oct. 1981.

Asimov's Guide to Halley's Comet. Isaac Asimov. Walker, New York, 1985. x, 118 pp., illus. \$12.95.

Aspects of Consciousness. Vol. 4, Clinical Issues. Robin Stevens, Ed. Academic Press, Orlando, Fla., 1984. xvi, 263 pp. \$45.

Assembly of Enveloped RNA Viruses. Monique Dubois-Dalcq, Kathryn V. Holmes, and Bernard Rentier. Springer-Verlag, New York, 1984. xvi, 236 pp., illus. \$49.50.

Atlantis in the Light of Modern Research. Zdeněk Kukal. Elsevier, New York, 1984. viii, 224 pp., illus. \$57.75. Reprinted from *Earth Science Reviews*, vol. 21. Translated from the Czech edition.

Lectures in Theoretical Population Biology. Lev R. Ginzburg and Edward M. Golenberg. Prentice-Hall, Englewood Cliffs, N.J., 1985. x, 246 pp., illus. Paper, \$17.95.

Left Brain, Right Brain. Sally P. Springer and Georg Deutsch. 2nd ed. Freeman, New York, 1985. xiv, 320 pp., illus. \$19.95; paper, \$11.95. A Series of Books in Psychology.

The Male in Farm Animal Reproduction. M. Courrot, Ed. Published for the Commission of the European Communities by Nijhoff, Dordrecht, Netherlands, 1984 (U.S. distributor, Kluwer, Hingham, Mass.). viii, 277 pp., illus. \$69.50. Current Topics in Veterinary Medicine and Animal Science. From a seminar, Nouzilly, France, Oct. 1983.

Managing Microcomputers in Large Organizations. National Academy Press, Washington, D.C., 1985. viii, 151 pp. Paper, \$13.75.

Managing the Partnership Between Higher Education and Industry. Jana B. Matthews and Rolf Norgaard. National Center for Higher Education Management Systems, Boulder, Colo., 1984. xiv, 242 pp., illus. \$14.95.

Marginal Basin Geology. Volcanic and Associated Sedimentary and Tectonic Processes in Modern and Ancient Marginal Basins. B. P. Kolelaar and M. F. Howells, Eds. Published for the Geological Society by Blackwell Scientific, Palo Alto, Calif., 1984. vi, 322 pp., illus. \$70. From a conference, Keele, U.K., Sept. 1982.

Universe in the Classroom. A Resource Guide for Teaching Astronomy and Instructor's Manual for *Universe* by William J. Kaufmann, III. Andrew Fraknoi. Freeman, New York, 1984. viii, 269 pp. Paper, \$8.95.

The Universe of Motion. Dewey B. Larson. 3rd ed. North Pacific Publishers, Portland, Ore., 1984. viii, 456 pp., illus. \$19. The Structure of the Physical Universe, vol. 3.

Urban Air Pollution, 1973-1980. Global Environment Monitoring System. World Health Organization, Geneva, 1984 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). viii, 96 pp., illus. Paper, \$5.50.

Variscan Tectonics of the North Atlantic Region. D. H. W. Hutton and D. J. Sanderson, Eds. Published for the Geological Society by Blackwell Scientific, Palo Alto, Calif., 1984. x, 270 pp., illus. \$60. From a meeting, Dublin, Sept. 1982.

Vibrational Spectroscopy of Phase Transitions. Zafar Iqbal and Frank J. Owens, Eds. Academic Press, Orlando, Fla., 1984. x, 316 pp., illus. \$61.50.

Wolfgang Pauli. Scientific Correspondence with Bohr, Einstein, Heisenberg, a.o. Vol. 2, 1930-1939. Earl von Meyenn, Ed. Springer-Verlag, New York, 1985. xl, 783 pp. \$110. Sources in the History of Mathematics and Physical Sciences, 6.

Personnel Placement

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POSITIONS WANTED

Anatomy-Sports Medicine Research. Interdisciplinary M.S. Tutored—gross anatomy, neuroanatomy, physiology. Research—neurophysiology, cardiac and brain transplant, small animal surgery. Exercise prescriptions and diagnosis of ligament and soft tissue injuries. Eligible for Emergency Veterans' Job Training Program (up to \$10,000 of first year salary). Box 127, SCIENCE. 6/7, 14, 21

Arid Lands/Renewable Energy Specialist. Ph.D. imminent. Private sector, 5 years of academic teaching experience; innovative research, publications, computer/atmospheric research skills. Excellent references. Seeks academic or R&D position. P.O. Box 520, Lady Lake, Florida 32659; telephone: 904-753-4289. 6/7, 14, 21

Cytogeneticist/Cell Biologist. Ph.D., 2 years of industrial experience in antineoplastic drug R&D and QC. Expertise in human tissue culture, carcinogenesis, and cytotoxicity testing. Excellent communication skills. Seeking position with biotechnology company. Box 118, SCIENCE. X

Ecologist. Ph.D. Five years of postdoctoral experience in limnological research, project management, and administration. Strong quantitative skills in biometry, aquatic system modeling, benthic community analyses, and impact assessments of forest products industry. Seeking teaching or research position at progressive school, private institute, or museum in western United States or Alaska. Box 124, SCIENCE. X

Environmental Toxicologist/Teratologist. Ph.D. Postdoctoral training and more than 10 years of environmental contaminant research experience in avian and mammalian toxicology, teratology, and biochemistry. Many publications. Seeks research position in environmental conservation oriented program or avian sciences. Box 123, SCIENCE. 6/7, 14, 21

POSITIONS WANTED

Experimental Psychologist. Ph.D., 1983. Human perception and cognition. Teaching and postdoctoral research experience in knowledge acquisition, knowledge structures, expert systems, pattern recognition, and event perception. Seeks research and/or teaching position in academia, industry, or government. Box 126, SCIENCE. X

Immunologist. Ph.D., 1977. Desires to relocate. R01 funded. Publications in cellular immunology, transplantation, arthritis, immunogenetics, endocrinology, and reproduction. Expertise with monoclonals. Medical, graduate, and postgraduate student teaching. Desires to relocate to an immunology group with strength in cellular and molecular immunology. Box 119, SCIENCE. X

Immunologist. Ph.D. (1982). Academic research experience in human cellular immunology. Immunoregulation. Lymphokines. Cell interactions. Regulatory circuits. Hybridoma and monoclonal antibody production. Immunoassays. Excellent publications and references. Seeking academic or industrial position. Box 130, SCIENCE. 6/7, 14, 21

Insect Toxicologist with strong background in maintaining healthy test colonies and establishing dosage-response relationships seeks position with industrial research and development program. Also possesses strong communication skills, experience with metabolic pathways of chemical insecticides and insect pathogens. Will accept postdoctoral fellowship. Box 128, SCIENCE. 6/7, 21, 7/5

Physician, recently qualified, intends to enter the research sector. Seeks a research training position under a preceptor in any basic medical research field (immunology/cardiovascular/cancer/others). Prefers position in a nongovernmental funded grant, either academic or industry. Forward correspondence by air mail to: Postfach 334, Zürich 8036, Switzerland. 6/7, 14

Plant Biologist/Molecular Biologist. Ph.D. Postdoctoral experience with chilling and salt stress in plants, also in plant molecular biology. Lecturing experience. Seeks teaching or teaching/research position in a small college. Box 129, SCIENCE. X

POSITIONS OPEN

UNIVERSITY OF WISCONSIN-MADISON AQUATIC BOTANIST

Research associate (postdoctoral) position available by 1 June 1985, for laboratory and lake studies on integrated control of Eurasian watermilfoil and impact of control strategies on water quality. Additional experience in water chemistry, limnology, or mycology desirable. Funding for 2 years. Salary competitive and commensurate with qualifications.

Send résumé, including the names of three referees, to:

Dr. John H. Andrews
Department of Plant Pathology
1630 Linden Drive
Madison, Wisconsin 53706

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ASSOCIATE PROFESSOR/PROFESSOR, ANATOMY. Ongoing research program and history of consistent funding essential. Send curriculum vitae and references to:

R. G. Hibbs, Ph.D., Chairman
Department of Anatomy
Louisiana State University Medical Center
P.O. Box 33932
Shreveport, La. 71130-3932

Affirmative Action/Equal Opportunity Employer

BIOLOGIST

One-year assistant professor position beginning fall 1985, with the possibility of becoming a tenure-track position in 1986/1987, for an invertebrate zoologist with a strong background in physiology. Preference will be given to candidates with experience in SEM/TEM and an ability to teach either developmental biology or animal histology. Participation in the department's lower division offerings for both majors and non-majors is expected. Ph.D. required. Applications will be received until the position is filled. Send curriculum vitae and the names of three references to: **Director of Personnel, St. Ambrose College, 518 West Locust Street, Davenport, Iowa 52803.**

Equal Employment Opportunity

POSITIONS OPEN

The Immunobiology Division of the Department of Pathology and Laboratory Medicine at the University of Pennsylvania School of Medicine has openings for two **tenure-track positions** at the **ASSISTANT PROFESSOR** level. Candidates should have at least 2 years of postdoctoral experience and a background in molecular biology and immunology or membrane immunobiology. Applicants should have expertise in cellular receptors and growth factors and an interest in regulation, cell growth, and differentiation in immune and nervous systems. Familiarity with flow cytometry, biochemistry, and immunological techniques desirable. Successful candidates will have demonstrated ability to develop an independently funded research program. Send curriculum vitae, bibliography and names of three references to: **Mark I. Greene, M.D., Ph.D., Director, Immunobiology Division, Department of Pathology and Laboratory Medicine/G3, University of Pennsylvania School of Medicine, 36th and Hamilton Walk, Philadelphia, Pa. 19104.** *The University of Pennsylvania is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR BIOCHEMISTRY/MOLECULAR BIOLOGY

The Department of Biochemistry at West Virginia University, School of Medicine, invites applications for a 12-month, tenure-track appointment to commence 1 January 1986. Applications from all areas of molecular biology are encouraged, but preference will be given to those employing state-of-the-art recombinant DNA technology to study mammalian development and/or differentiation. Responsibilities will include participation in graduate-level instruction and development of an extramurally funded research program. Applicants should submit curriculum vitae, brief statement of research interests, and have three letters of reference forwarded to: **Dr. Rolf F. Kletzien, Biochemistry Search Committee, Department of Biochemistry, West Virginia University School of Medicine, Morgantown, W.Va. 26506.** Deadline for applications is 15 July 1985.

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ASSISTANT PROFESSOR OF BIOCHEMISTRY. Tenure-track position in Department of Chemistry. Applicant will be expected to participate in teaching and in developing a research program in some aspect of plant or environmental biochemistry; collaborative opportunities in related disciplines. Doctoral degree required; strong background in chemistry and postdoctoral experience desirable. Send detailed curriculum vitae, research plans, and three letters of recommendation by 1 October 1985 to: **Dr. R. M. Silverstein, Department of Chemistry, State University of New York College of Environmental Sciences and Forestry, Syracuse, New York 13210.** *An Affirmative Action/Equal Opportunity Employer.*

The University of Michigan Medical School has a position available for an **ASSISTANT PROFESSOR, PHYSIOLOGY and SURGERY**, to become director of neurosurgical research in the Department of Surgery, Section of Neurosurgery, and to assume a tenure-track faculty position in the Department of Physiology. Duties include: establishing an outstanding research program in the Section of Neurosurgery; teaching physiology to medical, other health professional students, and graduate students. Necessary qualifications include a Ph.D. or M.D. degree, at least 2 years of postdoctoral research training, and a record of published work falling in the general area of cerebrovascular physiology, blood-brain barrier, and cellular-metabolic aspects of cerebral ischemia and edema. Emphasis must be at the cellular level of research. Reply to: **Dr. John A. Jacquez, Department of Physiology, University of Michigan Medical School, Ann Arbor, Mich. 48109.**

ASSISTANT PROFESSOR (population genetics), 12-month, tenure-track position available 1 September 1985. Ph.D. required; postdoctoral teaching/research experience desirable. Responsibilities include: teach undergraduate courses in general genetics; graduate courses in population and quantitative genetics; direct graduate students; develop a strong research program in population genetics; and interact with programs of other faculty. Curriculum vitae, official transcripts, reprints, future research plans, and three to five letters of recommendation should be received by 15 July 1985 or until a suitable candidate is identified. Application materials should be forwarded to: **Dr. John Pritchett, Professor and Head, Department of Zoology-Entomology, Auburn University, Auburn, Ala. 36849.**

Auburn University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF PLANT PHYSIOLOGY UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Tenure-track position to develop a research program on the physiology and biochemistry of crop plants, emphasizing transport and utilization of assimilate and nutrients. Desirable areas of research include, but are not limited to, development of photosynthate sources and sinks, genetic or phytohormone regulation of assimilate partitioning, the response of partitioning to environmental stress, and nutrient assimilation and transport. These investigations can be oriented toward the subcellular, cellular, or whole plant level. Responsibilities also include teaching one course per year. Applications including curriculum vitae, brief statement of future research interests, and three letters of reference should be sent by 15 August 1985 to: **Dr. L. E. Schrader, Head, Department of Agronomy, Announcement number 4/85A, University of Illinois, 1102 South Goodwin Avenue, Urbana, Ill. 61801.** For additional information contact: **Dr. W. L. Ogren, Search Committee Chairman, at the same address or by telephone at 217-333-4370.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT RESEARCH PHYSIOLOGIST THE DEPARTMENT OF PHYSIOLOGY- ANATOMY UNIVERSITY OF CALIFORNIA BERKELEY

Invites applications to fill a research position at the assistant research level (range: \$29,600 to \$33,600). This position is for a cell physiologist who will conduct research on the transport properties of the different cells of the isolated gastric mucosa. Applicants should have a Ph.D. and at least 4 years of postdoctoral experience, with a publication record in the field of epithelial transport. Expertise in measuring intracellular potentials using standard micro-electrodes, and ionic concentrations using double-barreled ion selective electrodes in gastric mucosa are also required. Interested individuals should write a letter explaining their qualifications and enclose current curriculum vitae and list of three or more persons who could act as referees to: **Search Committee, Department of Physiology, 2549 Life Sciences Building, University of California, Berkeley, Calif. 94720.** Applications must be received by 21 June 1985. *The University is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE DEAN FOR RESEARCH AND GRADUATE STUDIES

The Virginia-Maryland Regional College of Veterinary Medicine invites applications for the position of associate dean for research and graduate studies. This is the primary leadership position for the college's developing research and graduate programs. The appointment will be as professor with tenure on a calendar year basis, and salary will be commensurate with experience and qualifications.

Requirements: D.V.M. or equivalent and/or Ph.D. Demonstrated experience with funding agencies such as USDA and NIH, and administrative experience highly desirable.

Position available 1 July 1985. Applications, including curriculum vitae and three professional references, should be submitted to: **Dr. Peter McGovern, Chairman, Search Committee, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, Va. 24061.**

Closing date: 30 June 1985 or until position is filled. *An Equal Opportunity/Affirmative Action Institution*

OLD DOMINION UNIVERSITY

BIOCHEMIST—Tenure-track assistant professor position available August 1985. The department offers the B.S. degree in biochemistry, the B.S. and M.S. degrees in chemistry, and has a joint Ph.D. degree program in biomedical sciences with Eastern Virginia Medical School. Candidates should have an earned doctorate in biochemistry or clinical chemistry; postdoctoral experience preferred. Responsibilities include teaching undergraduate and graduate courses and initiating a vigorous research program. Areas of research preferred are nucleic acid chemistry or immunochemistry. Salary commensurate with qualifications and experience. Send curriculum vitae, brief statement of research interests, and three letters of recommendation by 1 July 1985 to: **Dr. Robert L. Ake, Department of Chemical Sciences, Old Dominion University, Norfolk, Va. 23508.** *Old Dominion University is an Affirmative Action/Equal Opportunity Institution.*

POSITIONS OPEN

BIOCHEMISTRY OR CELL PHYSIOLOGY—The Gastroenterology Division of the Department of Pediatrics, Medical College of Wisconsin, invites applications for a faculty position at the assistant or associate professor level. Applicants must have a Ph.D., postdoctoral training, and a record of research productivity. Research in the division is on developmental physiology and cell biology of the exocrine pancreas. Applicants should submit curriculum vitae and names of two referees to: **Starkey D. Davis, M.D., Professor and Chairman, Department of Pediatrics, Medical College of Wisconsin, 1700 West Wisconsin Avenue, Milwaukee, Wisconsin 53233.**

Equal Opportunity/Affirmative Action Employer, M/F/H

BIOLOGY: Temporary, full-time position, 1985–1986 academic year. Teach junior-level microbiology and cell biology. Begins 1 August 1985. Minimum qualifications: master's degree in biology with course background in microbiology and cell biology. Ph.D. preferred. Rank and salary commensurate with qualifications. Send résumé, transcript, and three letters of reference to: **James Stuart, Ph.D., Department of Biological Sciences, Murray State University, Murray, Ky. 42071.** *Murray State University is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGY—CHAIRPERSON

Wesleyan College is seeking a biologist with significant teaching experience and some administrative experience to head its Division of Science and Mathematics (includes biology, chemistry, mathematics, and computer science). Tenure-track position to begin in August 1985. Responsibilities include both administrative duties and teaching. The position requires a generalist, with expertise in zoology, genetics, microbiology, histology, and botany. Doctorate required. Wesleyan is a small, private, liberal arts college for women, and the successful candidate will be committed to the philosophy of the liberal arts and to the education and advancement of women. Please send letter of application, transcripts, and three letters of recommendation by 20 June to: **Dr. Kayron McMinn, Dean of the College, Wesleyan College, 4760 Forsyth Road, Macon, Georgia 31297.** *Affirmative Action/Equal Opportunity Employer.*

BIOMETRICIAN/SYSTEMS AND SCIENTIFIC PROGRAMMER

Consult in design, conduct, and analysis of clinical trials and other biomedical research studies, write customized statistical procedures in PL/I, and manage VAX computer system. Ph.D. in biostatistics or equivalent, 2 years of experience in VAX computer systems management and statistical software development. Salary: \$28,000. Send letter of application, curriculum vitae, transcripts, and three letters of reference by 1 July 1985 to: **E. B. Cox, M.D., Department of Medicine, Duke University Medical Center, Durham, N.C. 27710.** *Duke University is an Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON, DEPARTMENT OF MEDICINE UNIVERSITY OF CALIFORNIA, SAN DIEGO

Applications and nominations are invited for the position of professor and chairperson of the Department of Medicine, University of California, San Diego (UCSD), School of Medicine. The School of Medicine is seeking an individual of international stature who will provide leadership to a department encompassing general medicine and all medical specialties. The department has responsibility for the teaching of certain components of basic science to medical students. Accredited residency programs, as well as substantial and widely varied research programs, have made this a unique academic department. The UCSD Medical Center and VA Medical Center constitute the major sites of clinical programs and there are affiliations with other local hospitals. Qualifications include demonstrated clinical skills, demonstrated academic accomplishments, and administrative abilities. Candidates should be Board-certified and eligible for licensure in California. To qualify for senior academic appointment, candidates should have recognized accomplishments in research, together with publications in one of the disciplines in the department. Salary is based on academic rank and step of appointment within the established salary schedule. Reply to: **A. R. Moossa, M.D., Chairman, Search Committee for Medicine, Department of Surgery, UCSD Medical Center H-810, 225 Dickinson Street, San Diego, California 92103.** *The University of California is an Equal Opportunity/Affirmative Action Employer.* Closing date: 30 June 1985.

POSITIONS OPEN

CARDIOVASCULAR SCIENTIST: Rhode Island Hospital is recruiting a cardiovascular scientist to direct cardiovascular experimental laboratories within the Division of Cardiothoracic Surgery at the Rhode Island Hospital. Applicant must possess M.D. or Ph.D. and qualify for an academic appointment at assistant or associate professor level at Brown University. Broad training and experience in cardiac physiology is essential; experience in hemodynamics, to include cardiac assist devices, and cardiac electrophysiology, both laboratory and clinical, are desirable. The successful applicant must relate well to others in a supervisory capacity. He/she is expected to compete for research grants. Salary is competitive. *Brown University and Rhode Island Hospital are Equal Opportunity Employers.* Closing date for applications is 15 August 1985. Applications should be sent to: **Michael Cavanagh, Department of Surgery, Rhode Island Hospital, 593 Eddy Street, Providence, R.I. 02902.**

CELL BIOLOGIST

The Cardiovascular Research Center associated with a major city hospital is seeking a nationally recognized scientist in the field of cell biology. A strong background in cellular lipid metabolism, action of growth factors, or leukocyte activation is essential, particularly as related to the initial etiology and development of atherosclerosis. Such an investigator would participate in a multidisciplinary approach to the early detection and/or prevention of atherosclerotic vascular changes. Applicants must hold a Ph.D. and/or M.D. degree. Salary commensurate with qualifications. Please send a statement of research interests and complete curriculum vitae to: **Box 131, SCIENCE.**

THE UNIVERSITY OF MICHIGAN, CHAIRMANSHIP OF SURGERY. The University of Michigan Medical School is seeking an academic leader to direct the patient care, teaching, and research programs of its Department of Surgery. Qualifications include: national recognition as an academic surgeon, an M.D. degree and Board-certification in surgery, clinical competence, research expertise in a related area, and administrative skills. This position includes an instructional track faculty appointment. Please respond to: **Robert P. Kelch, M.D., Chairman, Surgery Review and Search Committee, c/o Department of Pediatrics, D1109 Medical Professional Building, Box 046, University of Michigan Medical Center, Ann Arbor, Mich. 48109-0010.** *A non-discriminatory, Affirmative Action Employer.*

DIRECTOR, SCHOOL OF MATERIALS ENGINEERING/GEORGIA INSTITUTE OF TECHNOLOGY. A new School of Materials Engineering has been formed by combining the School of Ceramic Engineering with the Metallurgy Program from the School of Chemical Engineering. The new school director will be expected to provide the leadership to develop the School of Materials Engineering into an outstanding academic unit. Major assets of the new position include: A solid base of existing faculty and an opportunity for expansion. Administration with a commitment to excellence and enlightened policies such as flexible budgets and 50 percent-plus return of overhead. Atlanta is a pleasant place to live with beautiful close-in residential areas and many cultural and sports activities. The director has responsibility for budgetary, administrative, and promotion decisions and reports to the dean of the College of Engineering. The director will hold the academic rank of professor of materials engineering. Submit résumés in confidence to: **Dr. Gary Poehlein, Acting Director of the School of Materials Engineering and Director of the School of Chemical Engineering, Georgia Institute of Technology, Atlanta, Ga. 30332-0100.** Telephone: 404-894-2867. *Georgia Tech is a unit of the University System of Georgia and an Equal Opportunity Employer.*

ENDOCRINOLOGY BIOCHEMISTRY/PHYSIOLOGY Postdoctoral Opportunities

Broad range of endocrine research projects: (i) isolation and identification of pituitary and lung peptides; (ii) physiologic and pharmacologic action; (iii) growth and control of function of fetal adrenals; (iv) role of growth factors in fetal development.

Send curriculum vitae, bibliography, three letters of recommendation, and short statement regarding career goals, interests, and experience to: **Dr. Samuel Solomon, Endocrine Laboratory, Royal Victoria Hospital, 687 Pine Avenue West, Montreal, Quebec, Canada H3A 1A1.**

EXECUTIVE VICE PRESIDENT of the CONSORTIUM FOR SCIENTIFIC COMPUTING, INC.

Applications and nominations are invited for this position. The Consortium for Scientific Computing, Inc. is a small, newly-formed, non-profit corporation with responsibility for establishing and operating the John von Neumann Computing Center. This facility was established to support a wide range of university and industry-related research requiring the use of supercomputers. The facility will contain the latest and most powerful supercomputers available and will be connected to a number of university campuses with high bandwidth communications links.

The successful candidate will play a key role in establishing this new research facility. The qualifications for the position include several years' experience in major scientific computing, preferably with modern vector-oriented supercomputers, communications skills, and leadership capabilities in a scientific research environment. An advanced degree in a pure or applied scientific or engineering discipline is required; a PhD or equivalent is highly desirable.

This position offers an excellent opportunity for professional recognition and career growth. We offer a competitive salary, a comprehensive benefits package and location in the Princeton, New Jersey area. For confidential consideration, please forward your resume with salary history and requirements before July 6 to: Dr. Alfred Brenner, President, Consortium for Scientific Computing, Inc., P.O. Box 3717, Princeton, NJ 08540.

The Consortium for Scientific Computing, Inc. is an equal opportunity employer.

Participating Institutions: University of Arizona, Brown University, University of Colorado, Harvard University, Institute for Advanced Study, Massachusetts Institute of Technology, New York University, University of Pennsylvania, Pennsylvania State University, Princeton University, University of Rochester, and Rutgers University.

Manager Clinical Research

Menley & James
Laboratories has
a challenging opportunity
for a Manager, Clinical Research
for its R&D Group located in new
facilities in King of Prussia, PA.

The successful candidate will be responsible for recommendation/selection of clinical investigators, for design of CRF's/protocols, and for monitoring of clinical studies, including coordination of data analysis and summarization. Further responsibilities include providing administrative support to the Director, Clinical Investigation, setting up systems for information storage/retrieval and managing the clinical studies budget.

Requirements include an advanced degree in a medically-related discipline (Ph.D. preferred), at least 5 years pharmaceutical or academic research experience which should include designing/writing clinical study protocols and CRF's, implementing and monitoring studies and working knowledge of FDA regulations. Experience programming microcomputers and in biostatistics is desirable.

We provide a challenging opportunity and a competitive salary and benefits package. Interested candidates should forward current resume with salary requirements to:

Bill Groves, **SmithKline Beckman Corporation**,
1526 Spring Garden Street,
Philadelphia, PA 19101.

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LABORATORIES, LTD.**

CSIRO AUSTRALIA

CHIEF OF DIVISION DIVISION OF MINERAL PHYSICS NORTH RYDE NSW

Applications for the position of Chief of the Division of Mineral Physics are invited from scientists with an established record of personal research achievement and leadership, and with proven experience in the applications of research in the fields of exploration, mining or instrumentation.

Mineral Physics is one of the Divisions of the Institute of Energy and Earth Resources, CSIRO, which encompasses a broad spectrum of research activities in minerals, energy and water resources, and in the industrial application of its research. The other Divisions are Energy Chemistry, Energy Technology, Fossil Fuels, Geomechanics, Groundwater Research, Mineral Chemistry, Mineral Engineering and Mineralogy and Geochemistry.

The Division of Mineral Physics headquarters are at Mineral Research Laboratories, North Ryde, a major Institute and CSIRO centre located in a suburb of Sydney, with a large group at Lucas Heights (southern Sydney), on the same site as Energy Chemistry, and a smaller group at Port Melbourne, Victoria, on the site of Mineral Chemistry. Of the total staff of 108, 71 are professional graduates.

Chiefs of Division are responsible to the Director of the Institute, and are expected to contribute to the corporate planning and operation of the Institute. The Chief of the Division will be responsible for the leadership, scientific direction and integration of the research programs of the Division and will encourage promotion of active collaboration with industry and with other CSIRO Divisions, Universities, appropriate State Departments, and other institutions conducting research in relevant areas. Managerial skills in relation to human resources and finance will also be required.

The work of the Division is closely linked to the needs of the Australian mineral and energy industries, particularly in the areas of exploration and processing, and lies within the broad objectives of the Institute. It has as its objectives the application of the principles and techniques of physics, engineering, mathematics and geology to the identification and solution of problems in the minerals and energy industries. Current research includes geophysical exploration methods and instrumentation, including airborne and satellite remote sensing, nucleonic methods, rock magnetisms and electromagnetic techniques; nucleonic and acoustic analysis methods of grade and quality control in mining, beneficiation, processing and utilisation of mineral and energy resources.

There are currently over 20 projects being conducted in collaboration with Australian mining companies generally with medium (3 to 5 year) goals. Commercialization of the Division's inventions and intellectual property is a feature of its operation. The Division also aims to establish and extend the permanent body of discipline knowledge on which its applications research is based.

The Division has substantial in-house computing and analytical equipment, which includes a rock magnetism laboratory and a heavy ion accelerator facility.

The Chief of the Division will be expected to plan and consolidate in the Division's current research areas, and, as appropriate, to identify new areas of research pertinent to Australian industry and to deploy resources to them.

The salary will be not less than \$A57,307 per annum plus an expense of office allowance of \$A1,200.

Appointment to CSIRO is for an indefinite period and carries Australian Government superannuation privileges, subject to normal conditions. The position of Chief of the Division is offered for a negotiable term of the order of five to seven years, with subsequent options for a further term, if mutually desired, or for a senior position in the Organization.

The Director of the Institute of Energy and Earth Resources would be pleased to provide further information about the position and to discuss the position with potential applicants. He would also be pleased to receive advice concerning the appointment from people with a particular interest in the position. The Director, Dr A F Reid, FAA, may be contacted by telephone in Melbourne (03) 542 2432.

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least three professional referees and quoting reference No A 3917 should be directed to:

**The Director
CSIRO Institute of Energy and Earth Resources
Private Bag 10
CLAYTON VIC
AUSTRALIA 3168**

by 28 June 1985

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

CELLULAR ENDOCRINOLOGIST

The W. ALTON JONES CELL SCIENCE CENTER invites applications for a research scientist in cellular endocrinology. This research will involve the isolation, bioassay, and characterization of hormone growth factors from brain and liver tissue for human endothelial and liver cells; perform long-term cultures of human endothelial cells; routine assay of angiotensin-converting enzyme activities and prostacyclin biosynthesis; routine primary culture of human endothelial cells from a variety of vascular sites; and develop methods for reproducible culture of hepatocytes from both fetal and adult human tissue.

The ideal candidate should possess a Ph.D. or M.D. degree in the area of cell biology with at least 4 years of postdoctoral experience in serum-free culture of human cells. A background to include primary and long-term serum-free culture of endothelial cells along with experience with bioassay and purification of novel growth factors for endothelial and liver cells, and knowledge of quantitative assay of cultured human endothelial and liver cell functions by modern methods is also a prerequisite.

Terms and conditions of employment will include: 37½ hours per 5-day work week—some overtime involved; salary: \$23,000 to \$28,000 per annum; benefits: annual vacation; paid holidays; sick leave; medical, life, and dental insurances; long-term disability and pension.

For prompt consideration, please forward a detailed résumé, include salary requirements, and names of references together with a list of relevant publications which have been published in major scientific journals to: **Ray Connors, New York State Job Service, 207 Genesee Street, Utica, New York 13501.** Refer to the following: Job Order 0300987—D.O.T. code 041.061.026.

An Affirmative Action/Equal Opportunity Employer

RESEARCH ENDOCRINOLOGIST

We are seeking a person qualified to apply techniques of molecular biology and/or cellular physiology to endocrine problems including diabetes mellitus. The Hospital for Sick Children is a major paediatric teaching hospital affiliated with the University of Toronto. There is a large multidisciplinary Research Institute within the hospital. This advertisement is directed to those who are legally eligible to work in Canada. Send enquiries to:

Dr. Robert M. Ehrlich, Chief, Division of Endocrinology, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8, Canada.

POSITIONS OPEN

UNIVERSITY OF EDINBURGH

Regius Chair of Geology

The Secretary of State for Scotland invites applications for the Regius Chair of Geology in the University of Edinburgh which falls vacant on 1 October 1985 following the retirement of Professor Sir Frederick Stewart.

The successful candidate will be expected to have made an internationally recognized contribution within some field of the geological sciences, and will assume the position of head of department. He/she must have outstanding leadership and administrative qualities and the ability to interact positively with academics and industry.

Further particulars of the appointment may be obtained from: **The Secretary, Room 3/114, New St. Andrews House, Edinburgh EH1 3SY, Scotland,** with whom applications (13 copies, except in the case of overseas candidates who may submit only 2 copies), giving the names of three referees, and should be submitted not later than 9 August 1985.

DEPARTMENT CHAIRPERSON. The Murray State University, College of Science, invites nominations and applications for the position of chairperson for the Department of Biological Sciences. Murray State University is a regional state supported institution located in western Kentucky. The University has an enrollment of approximately 8000 students and awards bachelors and masters degrees. Applicants should hold the Ph.D. in a biological discipline and have demonstrated excellence in teaching and research; administrative experience is desirable. Duties include administration of a 15-member department, management of academic programs in biology, leadership in curriculum and research development, and teaching in area of specialty. The department has 400 undergraduate majors, 20 resident graduate students, and strong programs in fisheries and wildlife biology, pre-professional studies, microbiology, and medical laboratory technology. A biological station on Kentucky Lake is also an integral part of the department. The position is a 12-month, tenure-track appointment. Rank and salary are negotiable. Applications will be accepted until the position is filled. The preferred starting date of the position is 1 August 1985, but later dates will definitely be considered. Nominations or applications, including curriculum vitae, official transcripts, and names and addresses of at least three references, should be sent to:

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

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

ECOSYSTEM SCIENTIST

The Department of Landscape Architecture and Regional Planning at the University of Pennsylvania seeks a Ph.D. with teaching ability in terrestrial ecology. The appointment will be a 9-month, tenure-track position at the assistant professor level. Willingness to instruct landscape architecture and regional planning students in field courses is essential. Opportunity exists for collaborative research in biogeochemistry and soil science. Please submit curriculum vitae, a summary of research interests, and names and addresses of three references by 1 July to: **Dr. Arthur H. Johnson, Department of Landscape Architecture and Regional Planning—GSFA, University of Pennsylvania, Philadelphia, Pa. 19104.**

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

The University of Michigan Medical School, Department of Radiology, has on occasion open **FACULTY POSITIONS** within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified or Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience. Interested applicants should contact: **William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** A nondiscriminatory, Affirmative Action Employer.

POSITIONS OPEN

DIRECTOR

LABORATORY OF NEUROBIOLOGY MEDICAL SCIENCES CAMPUS UNIVERSITY OF PUERTO RICO

Dr. José del Castillo is retiring from administrative responsibilities as director of the Laboratory of Neurobiology of the Medical Sciences Campus of the University of Puerto Rico. Candidates for this position are therefore being solicited. The laboratory was established in 1967 as an interdisciplinary, inter-departmental research facility with access to the rich and varied local fauna, both terrestrial and marine. It has a distinguished history of productivity and of attracting visiting scientists from throughout the world. There are excellent opportunities for further growth. The director reports directly to the chancellor of the Medical Sciences Campus and will be offered a tenure-track appointment in an appropriate academic department of the School of Medicine. Candidates should send their curriculum vitae and the names of at least three references to:

**Search Committee
Laboratory of Neurobiology
201 Boulevard Del Valle
San Juan, Puerto Rico 00901**

The Search Committee will begin evaluating applications on 1 August 1985. *The University of Puerto Rico is an Equal Opportunity/Affirmative Action Employer.*

ENERGY/ENVIRONMENT

Energy resource officer, state of Maryland, unclassified position. Participates in evaluation of environmental impacts of existing and future power plants. Advanced degree required (recent Ph.D. preferred, master's degree plus experience equivalent to doctorate may be acceptable) in a physical science or engineering discipline. Training or experience in one of the following areas is desirable: chemistry, geology, computer modelling, statistics, groundwater hydrology, and civil engineering. Complete state benefit package; location: Annapolis, Maryland. Salary \$25,227 to \$33,135 commensurate with qualifications. Apply (with résumé, technical writing sample, and names and current telephone numbers of three references) before 8 July to: **Dr. Michael Hirshfield, Director, Power Plant Siting Program, Tawes State Office Building (B-3), Annapolis, Md. 21401.** *Minority applicants are encouraged to apply. The state of Maryland is an Equal Opportunity Employer.*

The Institute for Human Genetics, University of Minnesota, invites applications for up to four 12-month, tenure-track positions in the field of **EUKARYOTIC MOLECULAR GENETICS** at the rank of assistant, associate, or full professor. Areas of interest include, but are not limited to, **gene transfer, neurobiology, and human disease.** Candidates with a doctoral degree plus 1 year relevant postdoctoral experience will be considered at the assistant professor level. Candidates with a doctoral degree plus 5 years professional experience, professional distinction in research, writing, and demonstrated effectiveness in teaching and advising will be considered at the associate professor level. Candidates with a doctoral degree plus 8 to 10 years professional experience, national reputation in research, demonstrated effectiveness in teaching and advising will be considered at the professor level. Candidates will be expected to develop a vigorous, independent research program, participate in teaching, and interact with Institute members in development of the Institute. Please send curriculum vitae, a short description of research plans, and three letters of recommendation to: **Dr. H. T. Orr, Institute for Human Genetics, University of Minnesota Medical School, Box 206 Mayo Memorial Building, 420 Delaware Street, SE, Minneapolis, Minnesota 55455.** The last day for receipt of applications is 31 July 1985. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

EXERCISE PHYSIOLOGIST (Ph.D.) is sought to become member of a research team examining the effects of prescribed medications on human behavior. Experience with microprocessor-based assessment procedures and a willingness to collaborate with psychologists and physicians are desirable. Position is a temporary civil service job with 1 year terms renewable for up to 4 years. Salary level ranges from \$26,381 to \$37,599, depending upon qualifications. Send curriculum vitae to: **Dr. Vincent M. O'Donnell, Department of Behavioral Biology (SGRD-UWI-C), Walter Reed Army Institute of Research, Washington, D.C. 20307-5100.**

NATIONAL INSTITUTE ON AGING NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institute on Aging (NIA) invites applications for the position of Chief, Section of Behavioral Medicine in NIA's Intramural Research Program. This position is located in the Laboratory of Behavioral Sciences, Gerontology Research Center in Baltimore, Maryland.

This is a Civil Service position with a salary range of \$52,262 to \$67,940 per annum depending upon qualifications. Candidates may be eligible for physicians' Comparability Allowance up to \$10,000 per year. Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

The Laboratory of Behavioral Sciences (Dr. Bernard T. Engel, Chief) currently is conducting clinical studies using behavioral methods to modify pathognomonic responses in patients with cardiovascular diseases, pulmonary diseases and incontinence. The Chief of the Section of Behavioral Medicine would have an opportunity to collaborate with other scientists in the Laboratory and the Center; however,

he would be expected to initiate and implement an independent research program.

Applicants may be either a Psychiatrist or other Physician with a special interest in clinical research in problem area related to the overall interests of the Laboratory.

A Personal Qualifications Statement (SF-171) with a current curriculum vitae and bibliography should be submitted no later than September 30, 1985 to: Mrs. Delores F. Davenport, Personnel Office, Room 1-D-09, Gerontology Research Center, 4940 Eastern Avenue, Baltimore, Maryland 21224. Further information may be obtained by contacting Mrs. Davenport at 301-955-1733.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.

NIH IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

MATERIALS SCIENTIST/CERAMIC ENGINEER

The Office of Naval Research is seeking a highly qualified individual to plan and manage a contract research program in Non-Metallic Materials. The research sponsored is conducted principally at universities and industrial laboratories. This is a Civil Service position at the GM-13, 14, or 15 level (\$37,599-\$67,940), depending on qualifications.

The position offers a unique opportunity for managing exciting developments in materials research across a range of scientific and technical areas including ceramics, composites, sonar transducer materials, and processing science. Position responsibilities include the direction and integration of research activities to advance fundamental scientific understanding in these areas as well as seeking new areas of research that are important to the Navy and Department of Defense.

Applicants must have a Ph.D. or equivalent in Materials Science or a related discipline and at least one year of professional experience or acquired a minimum of three years of progressively responsible professional experience. Applicants should have significant research and/or management experience in at least two of the areas listed above and at least one year of experience comparable in difficulty and responsibility to the next lower level in the Federal Service.

Interested persons should send a resume or Standard Form SF-171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), to:

OFFICE OF NAVAL RESEARCH

Civilian Personnel Division, Code 791SC
ATTN: Announcement #85-34 (S)
800 North Quincy Street
Arlington, VA 22217-5000

Applications will be accepted through 5 July 1985 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.

AN EQUAL OPPORTUNITY EMPLOYER

U.S. CITIZENSHIP REQUIRED

THE UNIVERSITY OF SYDNEY

CHALLIS CHAIR OF ANATOMY

Reference Number 19/02

Applications are invited from suitably qualified candidates for the Challis Chair of Anatomy. The chair has become vacant following the retirement of Professor M. J. Blunt.

Applicants should have a wide experience in the teaching of anatomy and should be familiar with the requirements of teaching anatomy to medical and dental students. Candidates will be expected to have an established reputation in research and to be actively engaged in research in anatomy or related field.

Possession of a medical degree is preferred. Non-medical graduates are also invited to apply.

Salary will be at the rate of A\$54,948 per annum plus a preclinical loading of A\$4,919 per annum where appropriate.

Applications in duplicate, quoting reference number, including curriculum vitae, list of publications, and the names and addresses of three referees, by 12 July 1985, to: the Registrar, University of Sydney, NSW 2006, AUSTRALIA, from whom further information is available.

The university reserves the right not to proceed with any appointment for financial or other reasons.

Equal Employment Opportunity is University policy.

LA TROBE UNIVERSITY MELBOURNE—AUSTRALIA

LA TROBE RESEARCH FELLOWSHIPS 1985/1986

Applications for research fellowships are invited from persons who have gained doctoral or equivalent qualifications within the last 5 years. A project must be proposed by an applicant and should ideally be in collaboration with a La Trobe University research worker or team of the applicant's choice, that is, it should complement an existing area of research at La Trobe.

Fellowships will be awarded for an initial period of 12 months with the possibility of renewal for a further maximum period of 12 months.

Salary offered is within the range of A\$22,614 to A\$26,236.

A fellowship will not be awarded to an applicant who holds a permanent appointment.

Prospective applicants should note that application must be made on the University's form which will be sent on request together with a copy of the Conditions of Award.

Enquirers should briefly indicate the research discipline of interest to them. The closing date for applications is 30 September 1985. For further information, write to: The Staff Officer, La Trobe University, Bundoora, Victoria, 3083, Australia.

POSITIONS OPEN

FACULTY POSITIONS IN BIOMEDICAL ENGINEERING, BOSTON UNIVERSITY COLLEGE OF ENGINEERING, at the assistant/associate/full professor levels in expanding Department of Biomedical Engineering for September 1985 or January 1986. Applicants should have an earned doctorate, be committed to quality teaching at both undergraduate and graduate levels, and have the desire to develop strong research programs. Collaboration with the Boston University School of Medicine or other engineering departments may be facilitated through a joint faculty appointment. Candidates with backgrounds in image processing, computer science, chemical engineering, mechanical design, electronics, computer engineering, biomechanics and materials, or robotics are especially welcome. Opportunities for part-time (adjunct) faculty positions and for collaborative arrangements with nearby institutions involved in biomedical research and development are also available. Candidates should send résumé, list of publications, names and addresses of five references, and a brief statement of teaching and research interests to: **Dr. Eugene Smithberg, Chairman, Engineering Search Committee, College of Engineering, 110 Cummings Street, Boston, Mass. 02215. Boston University is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITIONS IN PHYSIOLOGY

We are seeking applicants for tenure-track positions in the Department of Physiology of Meharry Medical College. In selecting candidates, we hope to complement an existing departmental strength in neuroscience and neuroendocrinology and to assign teaching responsibility for the cardiovascular sections of the medical and dental curricula. In addition to teaching and participation in the department's graduate training efforts, successful candidates will be expected to perform productive research and achieve extramural support. Applicants must have a Ph.D. degree (or equivalent) and postdoctoral experience. Send curriculum vitae, brief description of research interest, and names and addresses of three references to: **Dr. James G. Townsel, Chairman, Department of Physiology, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, Tenn. 37208.** These positions are available 1 July 1985. *An Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION AVAILABLE

The Department of Anatomy at Temple University, School of Medicine, is seeking applicants for a tenure-track position at the rank of assistant professor. Consideration also will be given to candidates at the early associate professor level. Candidates for this position will be expected to teach either in the gross anatomy course or in the microscopic anatomy and neuroanatomy courses. Experience and an interest in teaching medical students are essential. Candidates should demonstrate research productivity commensurate with the rank sought. Although no specific research area is required, it is preferred that the candidate's research incorporate some aspect of cell biology. The department has strength in development biology, reproductive biology, neurobiology, radiobiology, cardiovascular and diagnostic imaging research. A Ph.D. or M.D. degree is essential and postdoctoral research experience is required. This position is available as of 1 July 1985. The deadline for application is 28 June 1985. Qualified applicants are encouraged to send their curriculum vitae and references to: **J. Robert Troyer, Ph.D., Professor and Chairman, Department of Anatomy, Temple University School of Medicine, 3400 North Broad Street, Philadelphia Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

GC/MS OPERATOR ASSISTANT IN ENGINEERING position is available in the Department of Environmental Engineering Sciences, University of Florida, for experienced person to operate a Hewlett-Packard Model 5985B GC/MS System. The position requires, at a minimum, an M.S. degree in chemistry or a closely-related discipline. Operator is expected to prepare and analyze environmental samples for routine and research projects. Operator will fully participate in research proposals and implementation as related to operation of a GC/MS departmental service laboratory and assist in teaching applications. Application, including a résumé and three references, should be forwarded to: **Dr. Lamar Miller, Black Hall, University of Florida, Gainesville, Florida 32611,** by 30 June 1985. The position will be filled as soon as practical after that date. *The University of Florida is an Equal Opportunity/Affirmative Action Employer.* Salary is negotiable based on training and experience.

POSITIONS OPEN

FACULTY POSITIONS IN EUKARYOTIC MOLECULAR GENETICS

The Department of Microbiology and Molecular Genetics at the University of Cincinnati, College of Medicine, is expanding its faculty and is currently searching for individuals to fill tenure-track positions in the area of eukaryotic molecular genetics. Applicants should submit curriculum vitae, a short statement of research accomplishments and direction for future research, and the names of three scientists willing to write letters of recommendation. These should be forwarded to: **Dr. Jerry B. Lingrel, Chairman, Department of Microbiology and Molecular Genetics, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267-0524. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.**

FACULTY POSITION available, tenure-track, in molecular genetics, with a special interest in membranes. Applicants should have research background in recombinant DNA technology (preferably also in somatic cell genetics) and working knowledge of membrane proteins. M.D. and/or Ph.D. in appropriate field required. Successful candidate will hold tenure-track appointment (assistant or associate professor, depending upon qualifications) in Department of Physiology and Molecular Biophysics at Baylor College of Medicine. Joint appointments in relevant academic departments also possible. Laboratory space and basic equipment provided and initial laboratory support available. Successful candidate will devote majority of his/her effort to establishing and maintaining an independent research program related to the main interests of the department. The department is building a strong program in membrane biophysics with expertise in electrophysiology, membrane biochemistry, reconstitution, and modeling. Send curriculum vitae, a brief description of past and present research experience, and names of three or more references to: **Dr. A. M. Brown, Incoming Chairman, Physiology and Molecular Biophysics Department, Baylor College of Medicine, One Baylor Plaza, Houston, Texas 77030.**

An Equal Opportunity/Affirmative Action Employer

POSITION AVAILABLE AT THE UNIVERSITY OF CALIFORNIA, DAVIS, IN HUMAN DEVELOPMENT; 12-month (including 1-month vacation), 70 percent teaching/30 percent research, tenure-track position at the assistant professor level, beginning 1 January 1986 (negotiable). Salary range: \$29,600 to \$33,600 (increase expected 1 July 1985). Qualifications: Ph.D. in relevant discipline; specialization in human behavioral development; emphasis in biological bases of behavior or behavioral genetics; research expertise in adolescent/adult development. Responsibilities: teaching and advising in child/human development. Send curriculum vitae, statement of qualifications, list of publications, transcripts of undergraduate and graduate work if within 5 years of receiving doctorate, and names and addresses of three references to: **R. H. Kraft, Chair, Human Development Search Committee, Department of Applied Behavioral Sciences, University of California, Davis, Calif. 95616.** To be assured of consideration, submit materials by 31 July 1985.

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

INSTRUCTOR/ASSISTANT PROFESSOR, tenure-track, anatomy. Postdoctoral experience and a good publication record essential. Send curriculum vitae and references to:

**R. G. Hibbs, Chairman
Department of Anatomy
Louisiana State University Medical Center
P.O. Box 33932
Shreveport, La. 71130-3932**

Affirmative Action/Equal Opportunity Employer

MOLECULAR BIOLOGIST, postdoctoral fellow in second or third year of training. With experience in DNA sequencing or transcription to apply toward the elucidation of the structure and function of fragile sites and their relation to specific cancer chromosomal rearrangements. Salary approximately \$20,000 per year, commensurate with experience. Please submit curriculum vitae, three references, and a brief description of present and future research interests to:

**Dr. Jorge J. Yunis
Department of Laboratory Medicine and Pathology
Box 198 Mayo Memorial Building
University of Minnesota Medical School
Minneapolis, Minn. 55455**

WESTERN RESEARCH INSTITUTE

University of Wyoming Research Corporation

WRI is a private laboratory providing research services to government and industry in energy and environment. We have six excellent opportunities immediately available:

ENVIRONMENTAL ENGINEER—PhD in Environmental Engineering or MS with experience in groundwater contamination and cleanup.

ENVIRONMENTAL CHEMISTS/GEOCHEMISTS—MS with significant hazardous waste experience or PhD with less experience. Two positions, one requiring project management experience.

GROUNDWATER HYDROLOGIST—MS or PhD plus contaminant transport modeling training and/or experience. Field/industrial experience desirable.

ENVIRONMENTAL PROGRAM MANAGER—MS or PhD with significant accomplishment related to customer and regulatory liaison, and program development. Knowledge of marketing concepts is preferred.

ANALYTICAL CHEMISTRY SUPERVISOR—BS or MS in chemistry and three (3) years chemical analysis experience including instrument maintenance and troubleshooting. Prefer EPA water analysis, Technicon Autoanalyzer and Ion Chromatography experience.

Our location offers quality living, including abundant outdoor recreation, in a university, small community atmosphere. Apply with resume and salary expectations to: Manager of Personnel Services, **WESTERN RESEARCH INSTITUTE**, PO Box 3395, University Station, Laramie, Wyoming 82071. WRI is an equal opportunity employer.

MEMBRANE PATHOBIOLOGY

Hahnemann University of the Health Sciences

POSTDOCTORAL POSITIONS

Postdoctoral positions are available in the Membrane Pathobiology Group, which is concerned with the effects of alcohol, drugs and toxins on structure-activity relationships in biological membranes. The appointments provide opportunities for basic research and training in diverse aspects of membrane biochemistry and biophysics. Areas of current interest include:

1. Biophysical studies of protein-lipid interactions by NMR, ESR and fluorescence spectroscopy.
2. Phospholipid metabolism and the regulation of membrane fluidity.
3. Regulation of cellular calcium homeostasis and mechanisms of hormone signal transduction.
4. Membrane assembly.
5. Mitochondrial bioenergetics.
6. Oxidative stress and lipid peroxidation.

The Membrane Pathobiology Group consists of ten faculty investigators, and has extensive research facilities and equipment.

Major instrumentation includes a Bruker AM 360 WB NMR spectrometer, two ESR spectrometers (IBM ER 200D and Varian EI09-B), SLM time-resolved spectrofluorimeter, preparative and analytic HPLC, with computer-linked data analysis, and GLC. The Membrane Pathobiology Group conducts a weekly seminar program and provides an environment for significant interactions between basic and clinical research scientists.

Positions provide a competitive salary and are renewable annually. Interested applicants should send a curriculum vitae and names of 2 references to:

Emanuel Rubin, M.D., Chairman
Dept. of Pathology and Laboratory Medicine

**HAHNEMANN
UNIVERSITY**

**Broad and Vine
Philadelphia, PA 19102-1192**

Affirmative Action Employer

Postdoctoral Scientist Pharmaceuticals

The Pharmaceuticals Department of Smith Kline and French Laboratories is seeking a Postdoctoral Scientist to work in the area of peptide and protein drug delivery. The work environment is designed to foster innovative research and develop personal and professional growth. Publication of research findings in leading journals is encouraged.

The successful candidate will be involved in one or more of the following areas of basic research.

- Development of analytical methods to detect endogenous and exogenous peptides, proteins and their metabolites.
- **In vitro** tissue diffusion studies.
- **In vivo** delivery of peptides and proteins.

Required Candidate Qualifications:

- Ph.D. in either Pharmaceuticals, Analytical Chemistry, Biochemistry or related disciplines.
- Practical knowledge in one or more of the above listed areas of research.
- Excellent oral and written communication skills.

Postdoctoral positions are one year appointments renewable for a second year upon mutual agreement of employee and supervisor.

We offer an excellent salary, benefits, and relocation package as well as the opportunity for professional growth. Please forward your c.v. to George P. Kissell, Manager of Personnel Relations, SK&F Laboratories, 1558 Spring Garden St., Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

Research Scientists Doctoral & Postdoctoral

CIBA-GEIGY Corporation, a world renowned pharmaceuticals and specialty chemicals company, is currently seeking doctoral and postdoctoral level individuals to make significant contributions to the scientific research being done at our Pharmaceuticals Division's Research Center in Summit, New Jersey.

Behavioral Pharmacologist—Analgesia

This is a major opportunity for a Ph.D. scientist with expertise in the pharmacology of analgesia. You will supervise a laboratory involved in the evaluation of analgesic drugs, utilizing state-of-the-art instrumentation. The successful candidate will be a primary participant in a multidisciplinary drug discovery program and will work creatively with medicinal chemists, neurochemists and clinical investigators.

Candidates must have a strong background in the research of centrally/peripherally acting analgesic drugs. Experience beyond the postdoctorate is a strong asset. To demonstrate the extent of our commitment to scientific excellence, original research and publications are expected of all research staff at CIBA-GEIGY.

Postdoctoral Position

A postdoctoral scientist is sought to conduct basic research on the behavioral aspects of brain amino acid and neuropeptide actions. The proposed project involves microinjection of pharmacologically active substances into the brain. Anticipated tenure is 1-2 years.

We offer an excellent salary and benefits package, good relocation assistance and all the commitment you'd expect from a multibillion dollar multinational organization involved in on-going research. Our location is in a convenient suburban area within one hour from New York City. Interested candidates should forward a resume, including salary history and requirements, in confidence, to: Manager of Technical Staffing, The Pharmaceuticals Division, CIBA-GEIGY Corporation, Dept. S67, 556 Morris Avenue, Summit, NJ 07901. An Equal Opportunity Employer m/f/h/v.

Progress Through Innovation

CIBA—GEIGY

VIRGINIA INSTITUTE OF MARINE SCIENCE

FISHERIES CRUSTACEAN BIOLOGIST

Applications are invited for a tenure track faculty position in fisheries crustacean biology. The position is at the assistant or associate professor level in the Department of Fisheries Science, School of Marine Science/Virginia Institute of Marine Science (VIMS), College of William and Mary at Gloucester Point, Virginia. Candidates must have a Ph.D. in marine ecology, oceanography, or fisheries science. Experience is required in crustacean biology, statistics and marine field ecology.

The incumbent will be expected to develop and supervise a research program on crustacean biology with initial emphasis on blue crab recruitment, abundance and distribution. The incumbent will also supervise an on-going 30-year monitoring program for collection of data on juvenile blue crab abundance and distribution. Additionally, the incumbent will develop an ecological research program on other crustaceans, including their role in Chesapeake Bay finfish food webs.

VIMS serves as the mandated scientific advisory institution to state and regional fisheries management agencies, and as such the incumbent would be called upon periodically to serve on committees or advise such agencies.

The position, in the School of Marine Science, includes contributing to the academic program in the conduct of formal course offerings and direction of graduate student programs and research.

Prior to 1 July 1985, applicants should submit a vitae, statement of research interests, and the names and addresses of three references to: **Herbert M. Austin, Chairman, Search Committee, VIMS, Gloucester Point, Virginia 23062.**

An EEO/AA Employer. Minorities and women are encouraged to apply.

PROJECT LEADER

Genetic Systems, a leader in the field of biotechnology, has need of a Project Leader in Therapy.

Ph.D. with post-doctoral experience and supervisory ability will co-direct technical staff. Requires background in cell culture, preferably monoclonal, immunology or microbiology.

Genetic Systems offers competitive salaries and excellent benefits. Equal Opportunity Employer.

Desired starting date July, 1985. Please send curriculum vitae to:

Karen Hedine, Personnel Manager



Genetic Systems
CORPORATION

3005 FIRST AVENUE SEATTLE,
WA 98121-1035
(206) 624-4300

POSITIONS OPEN

INSECT/MICROBIAL ECOLOGIST

The Northern Regional Research Center, U.S. Department of Agriculture (USDA), is seeking an individual with a Ph.D. degree and research experience in insect-microbe interactions for a research scientist position in the Mycotoxins in Agricultural Systems Research Group, Fermentation Laboratory. The individual will be responsible for conducting research involving the interactions of insects and toxigenic fungi in cereal agroecosystems. The research will examine the role of seed-infesting fungi and their secondary metabolites as these influence insect behavior and population dynamics. Specific emphasis will be given to mechanisms of insect resistance to fungal toxins. Knowledge of and experience in insect chemical ecology, insect digestive physiology/gut microbiology, or natural products chemistry would be factors in selecting the successful candidate.

The position is GS-11/12 (\$25,489 to \$39,711). Send résumé to: **D. T. Wicklow, Insect/Microbial Ecologist Search Committee, Northern Regional Research Center, 1815 North University Street, Peoria, Ill. 61604. Equal Opportunity Employer.**

OLD DOMINION UNIVERSITY

MARINE MICROBIOLOGIST: Research-oriented, tenure-track assistant professor position available August 1985. Research experience in marine microbiology required. Teaching responsibilities include marine microbiology and general microbiology. Send curriculum vitae and names and addresses of three references by 24 June 1985 to: **Dr. H. G. Marshall, Department of Biological Sciences, Old Dominion University, Norfolk, Va. 23508. Old Dominion University is an Affirmative Action/Equal Opportunity Institution.**

MICROBIOLOGIST/CHEMIST

Beecham Laboratories, a leading manufacturer of veterinary biologicals, has the following job opportunities: (i) **Protein Chemist**—Research and development. M.S. or Ph.D. in biochemistry, microbiology background desirable; identify and purify immunogens. (ii) **Virologist**—Quality control. B.S. or M.S. in microbiology, virology background desirable. Responsible for in vitro test development and virus testing. To apply, send résumé plus salary requirements to: **Hans Draayer, Manager Biological Research and Development, Beecham Laboratories, East Lincoln Road, White Hall, Ill. 62092. An Equal Opportunity Employer.**

MUSSEL GLUE RESEARCH. We need a postdoctoral research colleague to join an exciting and challenging NSF-supported research project attempting to measure the adhesion of mussel glue proteins to various surfaces. Applicants should demonstrate a firm footing in chemistry/biochemistry. Experience in electrochemistry would be a definite asset. Send résumé and two letters of recommendation to: **H. Waite, Orthopaedics Research Laboratory, University of Connecticut Health Center, Farmington, Conn. 06032.**

An Affirmative Action/Equal Opportunity Employer, M/W/H

PHYSIOLOGIST

The West Virginia School of Osteopathic Medicine (WVSOM) invites applications for a tenure-track appointment at the **assistant professor** level. Applicants should have a systems physiology background (Ph.D.) with expertise in the cardiovascular system. Successful candidate will exhibit a strong commitment to teaching and demonstrate an active interest and background in research.

Applications, including current curriculum vitae and three letters of reference, should be sent to: **Michael K. Cope, Ph.D., Associate Dean for Academic Affairs, West Virginia School of Osteopathic Medicine, 400 North Lee Street, Lewisburg, West Virginia 24901, no later than 15 July 1985.**

WVSOM is an Affirmative Action/Equal Opportunity Employer.

PLANT MOLECULAR BIOLOGY. U.S. Department of Agriculture (USDA-ARS) has a research affiliate position available to clone and study expression of enzymes involved in amino acid biosynthesis. Send curriculum vitae and three letters of references by 1 July to: **Dr. B. F. Matthews, USDA-ARS, Tissue Culture and Molecular Biology Laboratory, Room 116, Building 011-A, BARC-West, Beltsville, Maryland 20705. U.S. citizenship required. Equal Opportunity Employer.**

POSITIONS OPEN

MARINE PHYCOLOGIST—University of Washington, the Botany Department, and Friday Harbor Laboratories seek a marine phycologist who will be a research faculty member. Research and teaching will be at the Friday Harbor Laboratories. The successful candidate is expected to develop an externally-funded research program (focusing on benthic marine algae or marine phytoplankton) which will provide salary support for quarters when not teaching. Send curriculum vitae, description of research plans, and have three letters of recommendations sent to: **Marine Phycology Search Committee, Department of Botany KB-15, University of Washington, Seattle, Washington 98195.** Deadline for applications is 1 October 1985. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR AND CELLULAR BIOLOGISTS

The University of North Carolina (UNC) at Chapel Hill, which has a broad, nationally recognized program in various aspects of blood coagulation and thrombosis, is seeking individuals with a strong basic science background to join the Division for Research in Thrombosis and Hemostasis within the Department of Pathology. This division is affiliated with the Institutional Center for Thrombosis and Hemostasis. Presently, the program includes molecular biologists, immunologists, geneticists, biochemists, clinicians and experimental pathologists from the Departments of Chemistry, Biology Biochemistry, Medicine, and Pathology. The program is being expanded under a state-funded Excellence Project. We are seeking individuals who possess significant leadership potential and whose interests and abilities will enhance the present effort. In addition to having a strong commitment to research and an M.D. or Ph.D., candidates must have a minimum of 3 years of postdoctoral experience. Established investigators from a broad array of disciplines such as cancer research or protein chemistry are encouraged to apply. Rank and salary will be commensurate with experience. Please send applications or nominations to: **Dr. John B. Graham, Department of Pathology, University of North Carolina, Chapel Hill, N.C. 27514, or telephone: Dr. Graham for more information at 919-966-4318. UNC is an Affirmative Action/Equal Opportunity Employer.**

MOLECULAR NEUROSCIENTIST

Tenure-track assistant or associate professorship is available for an outstanding molecular neuroscientist. We seek an individual who would interact with our neuroscience oriented faculty and trainees in developing research problems related to gene expression during development and aging, the production of enzymes essential for neurotransmission, and immune and plastic phenomena in the nervous system, for example. The University of Rochester is characterized by a high degree of cooperation among departments, thus the successful candidate could expect also to develop research collaborations with the extensive molecular biology community at the University. Teaching responsibility in either medical histology or neural sciences. Please forward curriculum vitae, statement of research interests, and names of three references to:

**John R. Sladek, Jr., Ph.D.
Professor and Chairman
Department of Anatomy
University of Rochester
School of Medicine and Dentistry
601 Elmwood Avenue
Rochester, New York 14642**

Equal Opportunity Employer, M/F

PLANT PATHOLOGIST

The Northern Regional Research Center, U.S. Department of Agriculture (USDA), is seeking an individual with a Ph.D. degree and research experience in correlative microscopic and histochemical studies of the fungal infection process, for a postdoctoral scientist position (not to exceed 4 years), in the mycotoxins in Agricultural Systems Research Group, Fermentation Laboratory. The individual will be responsible for conducting research involving the process of fungal infection and role of extracellular fungal enzymes and pathotoxins in the histopathology of common ear and kernel rotting molds. Knowledge of and experience in transmission electron microscopy, cytochemistry, and the biochemical basis of host-parasite interactions would be factors selecting the successful candidate. The position is GS 11/12 (\$25,489 to \$39,711). Send résumé to: **D. T. Wicklow, Northern Regional Research Center, 1815 North University Street, Peoria, Ill. 61604. Equal Opportunity Employer.**

RESEARCH SCIENTISTS

BioTechnica International, Inc., a company specializing in the development of next-generation technologies in the areas of microbial production systems, biochemical engineering, and agricultural biotechnology, has openings at its Cambridge, Massachusetts facility for highly motivated Research Scientists. BTI is seeking to fill positions in the areas of:

- **Bacterial Physiology**
Job no. 10

To apply genetic technologies and recombinant DNA methodology to the production of metabolites and chemicals in bacterial species. A Ph.D. is required.

- **Yeast Genetics**
Job no. 11

To work on metabolism in yeast. A Ph.D.-level position; experience with molecular genetics in yeast preferred but not required.

BTI offers highly competitive salaries, excellent employee benefits and opportunities for professional growth in a stimulating and productive environment. Please send a letter of application, referring to job number, along with a resume and the names of three references by July 15, 1985, to:

Director of Administrative Services
BioTechnica International, Inc.
85 Bolton Street
Cambridge, Massachusetts 02140



PROTEIN CHEMIST

Program Resources, Inc., the Operations & Technical Support Contractor for the NCI-Frederick Cancer Research Facility, has an immediate opening for a Protein Chemist in the Chemical Synthesis & Analysis Laboratory.

The successful candidate will have a PhD in Biochemistry with 1-3 years experience in protein isolation and purification. A working knowledge of techniques associated with the isolation, purification, and purity determination of proteins and associated materials is essential. Familiarity with biochemical laboratory procedures associated with protein production, isolation, purification, and purity determination is also necessary.

Program Resources, Inc. offers an attractive salary and company benefits program, including relocation assistance.

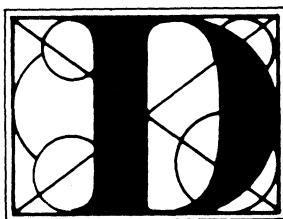
For consideration, please send resume/curriculum vitae, salary requirements, three letters of reference, and a complete publication list to:



PROGRAM RESOURCES, INC.
NCI-Frederick Cancer Research Facility
P.O. Box B
Frederick, Maryland 21701

Equal Opportunity Employer, m/f.

Flow Cytometry Research Assistant Fluorescence Activated Cell Sorter Operator



What will you
Discover
when you join Lederle?

A Professional Environment That Puts Research To Work

Lederle Laboratories, one of the world's foremost companies in the development and manufacture of new pharmaceuticals, has an excellent opportunity within the Inflammation and Immunology Research Department of its Metabolic Disease Research Section. The research assistant we seek will assume responsibility for the operation of its Flow Cytometry Laboratory Facility.

We require extensive experience with the operation and maintenance of flow cytometry equipment. The appropriate candidate will also possess a B.S. or M.S. in biology or a field related to biomedicine/bioengineering or have acquired compensatory relevant experience in flow cytometry.

The research assistant will be responsible for the operation of the flow cytometer (a Becton Dickinson FACS 440 with the Consort 40 computer package), maintenance of the flow cytometry facility, direct participation in both the drug screening and basic research programs of the Inflammation and Immunology Research Department, and assisting in other research programs at Lederle Laboratories.

At Lederle, you'll also discover a stimulating, highly professional environment in Rockland County, just 35 miles northwest of New York City, as well as a highly competitive salary and benefits package, including a 401K savings plan option. For immediate consideration, forward your resume, including salary requirements, in confidence to: Mrs. Nancy Levine, Professional Employment Coordinator, Lederle Laboratories, American Cyanamid Company, Medical Research Division, Pearl River, New York 10965. An Equal Opportunity Employer m/f.



Dedicated People
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Biochemist Pharmaceutical Research

Pfizer Central Research has an opening for an innovative PhD Biochemist to work with a multi-disciplinary group of scientists engaged in the discovery of new medicines to treat gastrointestinal, metabolic and cardiovascular disorders.

In addition to a PhD in Biochemistry and appropriate post-doctoral work, you must be able to demonstrate the flexibility and creativity necessary to apply your research experience towards the discovery of important new drugs. Sound training, a good publication and achievement record in addition to the above qualities are of more importance than the specific area of biochemical expertise. However, prior experience in the isolation, purification and assay of membrane-bound enzymes and/or cellular protective mechanisms would be advantageous.

This position offers an excellent opportunity for professional recognition and career growth within a major pharmaceutical research organization. Excellent equipment and support systems are available at our newly constructed research facilities. The publication of important findings and interaction with external scientists are both actively encouraged. In addition we offer a competitive compensation, benefit and relocation package and the opportunity to live in an attractive Connecticut shore community. Please send resume and brief description of research interests to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal opportunity employer

POSITIONS OPEN

MOLECULAR GENETICIST

The Department of Physiology and Pharmacology is seeking a molecular geneticist to participate in the development of molecular genetics in the area of animal reproduction. The successful applicant is expected to have advanced training (Ph.D.) with postdoctoral experience in molecular genetics. A D.V.M. or equivalent animal experience is preferred but not required. Apply by 15 August to: Dr. Benjamin G. Brackett, Head, Department of Physiology and Pharmacology, College of Veterinary Medicine, The University of Georgia, Athens, Ga. 30602. An Equal Opportunity/Affirmative Action Employer.

Science: **NEUROSCIENCE RESEARCH POSITIONS** available for postdoctoral scientist interested in adult and/or child psychopathology. Tenure-track available for individual with established competence. Generous benefits, New York State position in Rockland suburb of New York City. Send curriculum vitae to: Search Committee, NATHAN S. KLINE INSTITUTE FOR PSYCHIATRIC RESEARCH, Orangeburg, N.Y. 10962. An Equal Opportunity Employer, M/F.

PHARMACOLOGY

The Department of Pharmacology, Division of Functional Biology, of the West Virginia School of Osteopathic Medicine (WVSOM), seeks two assistant or associate professors of pharmacology. Applicants must have a good background in general physiology and pharmacology, with experience in one or more of the following areas: cardiovascular, pharmacology, neuropharmacology, chemotherapy, and antibiotics. Significant teaching experience and a demonstrated ability to conduct independent research are also required.

Rank and salary will be commensurate with qualifications. Send current curriculum vitae and three letters of recommendation to: Michael K. Cope, Ph.D., Associate Dean for Academic Affairs, WVSOM, 400 North Lee Street, Lewisburg, West Virginia 24901, by 31 July 1985. The position is available immediately.

WVSOM is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL—CELLULAR SECRETION. Available immediately to study secretory mechanisms in the adrenal chromaffin system. Experience in any of the following areas desirable: cell calcium regulation, P. Inositol metabolism, cell culture, membrane biophysics. Send curriculum vitae, bibliography, and the names of three references to: Dr. Allan Schneider, Sloan-Kettering Institute, Cornell University Graduate School of Medical Sciences, 1275 York Avenue, New York, New York 10021.

THE AUSTRALIAN NATIONAL UNIVERSITY INVITES applications from suitably qualified men and women for appointment as **POSTDOCTORAL FELLOW IN ZOOLOGY**. The successful applicant will work on a NH and MRC funded project involving gene cloning of sheep parasites particularly larval tapeworms and liver fluke. Particular interest will be centered on those genes which code for antigens that are involved either in resistance to reinfection or immunopathological phenomena. A principal objective will be to obtain expression of these antigens in prokaryotic systems. Experience in gene cloning techniques is essential and some knowledge of immunological procedures would be highly desirable. The successful applicant will work in the Center for Recombinant DNA Research, Research School of Biological Sciences (Executive Director: Professor J. A. Pateman, FRS). The position is funded for 3 years. Further information is available from: Dr. M. J. Howell, telephone: (062) 49 3060 or (062) 49 4225. Closing date: 15 July 1985. Reference: FS/1.5.1. Salary will be in accordance with qualifications and experience within the range: postdoctoral fellow, A\$21,411 to A\$24,528. Current exchange rate: A\$1 = \$U.S. .63. Grants toward travel and removal. Assistance toward housing; superannuation. Maternity leave is available. The University reserves the right not to make an appointment or to make an appointment by invitation at any time. Previous applicants need not reapply as all applications will be considered. Prospective applicants should write to the undersigned for further particulars quoting reference number FS/1.5.1 before submitting applications which close 15 July 1985. Patricia M. White, Acting Registrar, The Australian National University, G.P.O. Box 4, Canberra, ACT 2601, Australia.

The University is an Equal Opportunity Employer.

POSITIONS OPEN

PLANKTON TAXONOMIST

Natural History Museum of Los Angeles County has an immediate opening at the level of **curatorial assistant** to identify fish eggs and larvae in support of marine ecological studies. Some opportunity for independent research. Salary range: \$18,480 to \$23,028 per year. M.S. preferred, with expertise in some area of zooplankton taxonomy. Send résumé to: Dr. Robert J. Lavenberg, Curator of Fishes, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, Calif. 90007. An Affirmative Action/Equal Opportunity Employer.

PLANT PHYSIOLOGIST. U.S. Department of Agriculture, Agricultural Research Service, Northern Grain Insects Research Laboratory, Brookings, South Dakota, is seeking applications for a plant physiologist to conduct research on stress factors affecting plant growth and development with major emphasis on corn. Knowledge of plant physiological processes; plant biochemistry; agricultural ecosystems and crop production systems; soil chemistry; and physics is required. GS-11/12; salary range: \$26,381 to \$31,619 based on qualifications. Candidates must be U.S. citizens. Contact: Dr. Gerald Sutter, telephone: 605-693-5201 for assignment details and Jean Dunn, telephone: 301-344-1700 for application procedures. Applications must be submitted by 12 July 1985. Candidates must be available by 1 January 1986. Equal Opportunity Employer.

PLANT PHYSIOLOGIST. U.S. Department of Agriculture, Agricultural Research Service, U.S. Dairy Forage Research Center and Department of Agronomy, University of Wisconsin, Madison. Research on composition of forage plants in relation to its effect on digestible energy contents with particular attention to lignification and other factors affecting the biological availability of plant cell walls. Ph.D. in plant physiology, biochemistry, or related field desired. Knowledge of plant physiology and plant biochemistry required. GS-11/12; salary range: \$26,381 to \$31,619 based on qualifications. Candidates must be U.S. citizens. Contact: Dr. Charles Kiddy, telephone 608-263-2030 for assignment details, and Jean Dunn, telephone: 301-344-2756 for application procedures. Applications must be submitted by 1 July 1985. Equal Opportunity Employer.

University of Toronto: Department of Botany. **POSTDOCTORAL FELLOW** required to work in group studying molecular basis of metal-tolerance in micro-organisms and higher plants. Applicants should have experience in recombinant DNA techniques; knowledge of microbial physiology and plant ecology an advantage. Salary is in range of C\$21,500. Position is available immediately. Please send detailed letter and curriculum vitae, plus three letters of reference, to: Professor T. C. Hutchinson, Department of Botany, University of Toronto, Toronto, Ontario, Canada M5S 1A1.

POSTDOCTORAL FELLOWS: Several laboratories in the Division of Membrane Biology at the University of Alabama at Birmingham seek Ph.D.'s or M.D.'s for research projects dealing with transport processes in absorptive and secretory epithelia. Technical experience of these laboratories includes: perfusion of single nephron segments, transepithelial flux studies, microelectrode and ion-selective electrode recordings, patch clamp, isolation and reconstitution of ion channels into planar lipid bilayers, and other aspects of membrane biochemistry. Support for these positions at NIH scale is available for at least 2 years. Send curriculum vitae and references to: Dr. Raymond A. Frizzell, Department of Physiology and Biophysics, University of Alabama at Birmingham, University Station, Birmingham, Alabama 35294. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP POSITIONS MOLECULAR BIOLOGY

Well-established cardiovascular research laboratory studying the molecular biology of lipoproteins and receptors is seeking molecular biologists with experience in cloning and DNA sequencing. Candidates with a Ph.D. in molecular biology or biochemistry are eligible. Send curriculum vitae and three letters of reference to: Personnel, c/o Dr. Brian McCarthy, The Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, San Francisco, P.O. Box 40608, San Francisco, Calif. 94140-0608.

BASIC SCIENCE FELLOWSHIPS IN OPHTHALMOLOGY RESEARCH

Three postdoctoral positions are now available on a competitive basis in the Department of Ophthalmology, LSU School of Medicine in New Orleans. This is a multidisciplinary department in eye research offering training opportunities in Anatomy, Biochemistry, Biophysics, Cell Biology, Computer Science, Immunology, Microbiology, Neurobiology, Pharmacology, Physiology, and Virology. Current research emphasizes the anterior segment of the eye, an area of opportunity for career development. The faculty is well-funded and the program has an excellent record of postdoctoral placement.

Applications are currently invited in the following areas:

- 1) *Corneal neurobiology*. Sensory nerve regeneration; neurotrophic relationships; transduction mechanisms in the peripheral sensory systems. R.W. Beuerman, Ph.D.
- 2) *Corneal immunobiology*. Mechanisms of corneal allograft rejection; alloantigen expression by corneal cells; immune mechanisms in HSV stromal keratitis. B.M. Gebhardt, Ph.D.
- 3) *Corneal physiology*. Control of ion and fluid transport processes; including pharmacological, intracellular, and numerical approaches; mensuration of corneal shape in the human. S.D. Klyce, Ph.D.

Successful candidates will have completed their Ph.D. requirements in one of the basic medical sciences prior to the start of their fellowship, have U.S. citizenship, and be willing to make a 2 year commitment. Basic support will be provided by the departmental training grant. A summary booklet of Eye Center research programs is available on request. Send inquiries to: **Director of Research Training Opportunities, LSU Eye Center, 136 South Roman Street, New Orleans, LA 70112.** LSU is an Equal Opportunity Employer.

MEDICINAL CHEMIST/BIOCHEMIST

The Pharmaceutical Research and Development Division of Bristol-Myers Company has a position in its Experimental Toxicology Department for a Research Scientist. Selected candidate will participate in a research program designed to define structure-activity relationships as they relate to drug target organ receptor interactions. Duties will include but not be limited to performing and directing research projects aimed at elucidating mechanisms of drug toxicity utilizing cellular and subcellular techniques, and performing structural modifications on existing structures as needed.

To qualify, you will need a PhD in Medicinal Chemistry or Biochemistry combined with training and experience in cellular or subcellular pharmacology, toxicology, biochemistry or drug metabolism. Experience utilizing modern analytical instrumentation (HPLC, NMR, spectroscopy, column chromatography) as well as demonstrated synthetic ability is also required.

We offer excellent starting salary, comprehensive benefits and a work environment conducive to your professional growth. For prompt, confidential consideration, forward your resume with salary history and requirement to: **EMPLOYMENT RECRUITER**



**BRISTOL-MYERS COMPANY
RESEARCH AND DEVELOPMENT DIVISION**

P.O. Box 4755, Syracuse, New York 13221
An equal opportunity employer



KING ABDULAZIZ UNIVERSITY in Jeddah, Saudi Arabia calls for qualified applications for academic post of Associate Professor or Professor in the following specialities:

Male Staff: Physics, Biochemistry, Anatomy, Laboratory Hematology, Clinical Chemistry.

Female Staff: Biology, Physics, Pathology, Preventive Medicine, Organic Chemistry, Physical Chemistry.

All qualified applicants, please send detailed curriculum vitae to the following address:

Dean,
Faculty of Medicine and Allied Sciences
King Abdulaziz University
P.O. Box 9029
Jeddah, Saudi Arabia

Research Scientist Lipid Biochemistry And Metabolism

The Skin Care Discovery Research Group at American Cyanamid's Shulton Research Division has a newly-created position for an innovative scientist with post doctoral experience in lipid biochemistry and metabolism.

The individual we seek will initiate and perform studies relating to changes in skin lipid biochemistry which occur with age and be able to translate these scientific observations into skin care consumer products. The ability to interact effectively with scientific/academic and business communities is essential.

American Cyanamid offers challenge, recognition and a professionally rewarding environment. Additionally, you'll receive a highly competitive salary and comprehensive benefits. For immediate consideration, please forward a copy of your curriculum vitae to:



American Cyanamid Company
Shulton Research Division
Attn: Ms. S.L. Johnson
Manager, Administration, Dept. E
697 Route 46, Clifton, NJ 07015
An Equal Opportunity Employer m/f

DISTINGUISHED RESEARCH FELLOWSHIPS

Los Alamos National Laboratory

The Medical Radioisotope Research Group is seeking three outstanding recent Ph.D. recipients for the postdoctoral fellowships described below. All positions require responsibility for planning, initiation, and implementation of independent research and presentation of research results. The ability to work as a team member is also required. Postdoctoral appointments are for one year with possible renewal for a second year. Compensation is \$27,900-\$29,376 per annum. **U.S. citizenship is required.**

Synthetic organic or bioorganic chemist to conduct research to prepare some molecules labeled with radionuclides (halogens or metals) for conjugation to monoclonal antibodies. Particular emphasis will be given to halogenation reactions using radioisotopes of bromine and iodine. Assist in animal biodistribution studies of radiolabeled molecules. Experience in halogenation, radiolabeling, chelation reactions or synthetic reactions utilizing organometallic reagents is required.

Protein chemist or immunologist to develop methods to radiolabel monoclonal antibodies and covalently bind radiolabeled small molecules to whole and fragmented antibodies. Determine stability, affinity, immunoreactivity and biodistribution of radiolabeled antibodies. Experience in immunological methods or protein modification is required.

Analytical, inorganic, or radiochemist to develop chemical separation procedures on a no-carrier-added level to isolate radioisotopes of interest to the nuclear medicine research community. Perform chemistry in radiochemical hot-cells. Develop new radioisotope generator systems. Interact with radiolabeling and biodistribution efforts of the program. Experience in chemical separation methods (ion-exchange, solvent extraction) and gamma-ray analysis is desirable.

To Apply: Interested candidates should send a resume to Janet Mercer-Smith (protein applicants) or to Fred Steinkruger (separation applicants) at INC-3, MS J514, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

To formally apply, send resume, bibliography, three letters of reference, and graduate and undergraduate transcripts to:

Sandy Harding, DIV 85-CW
Personnel Administration Division
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Los Alamos National Laboratory is an Affirmative Action/Equal Opportunity Employer operated by the University of California for the United States Department of Energy.

University of California



POSITIONS OPEN

POSTDOCTORAL POSITIONS. The Center for the Study of Active Oxygen in Biology and Medicine announces ongoing opportunities for postdoctoral positions in lipid peroxidation, ischemia, TCDD toxicity, and the biological oxidation of environmental pollutants. Apply in writing by submitting curriculum vitae, statement of career goals, and names and addresses of three references to: **Steven D. Aust, Director, Center for the Study of Active Oxygen in Biology and Medicine, Department of Biochemistry, Michigan State University, East Lansing, Mich. 48824.**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITIONS to study genes involved in tumor progression, metastasis, and resistance to chemotherapeutic drugs. Techniques to be utilized include recombinant DNA methodology, in-gel DNA renaturation, orthogonal field electrophoresis, and cell culture. Background in molecular biology and biochemistry is desirable. Salary competitive and commensurate with experience. Please send résumé and three letters of reference to: **Dr. Igor Roninson, Center for Genetics, University of Illinois at Chicago, 808 South Wood Street, Chicago, Ill. 60612.** *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN NEUROBIOLOGY AND NEUROPATHOLOGY

Multidisciplinary-neurobiology group (Drs. N. K. Gonatas, W. F. Hickey, R. Hogue-Angeletti, V. M.-Y. Lee, W. W. Schlaepfer, and J. Q. Trojanowski) offers positions in a training program to individuals interested in: endocytosis and intracellular transport of ligands in vitro and in vivo; immunological mechanisms mediating EAE; neurofilament protein structure, molecular biology, metabolism and expression in vitro and in vivo; molecular mapping of chromaffin granule membrane, nervous system-immune system interactions. Send résumé and names of three references to: **Dr. N. K. Gonatas, Director of Neuropathology, 447 Johnson Pavilion/G2, University of Pennsylvania School of Medicine, Philadelphia, Pa. 19104.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to study parathyroid hormone (PTH) receptors in kidney and bone cells. Areas of interest include purification and reconstitution of the PTH receptor, development of monoclonal anti-receptor antibodies, and receptor-cyclase coupling. Structural alterations in PTH receptors attendant to desensitization are also under investigation. Strong background in membrane and/or receptor biochemistry is desired. Send curriculum vitae and names of references to: **Dr. Robert A. Nissenson, Ph.D., VA Medical Center (11N), 4150 Clement Street, San Francisco, Calif. 94121.** *Equal Opportunity Employer. U.S. citizenship required.*

POSTDOCTORAL POSITION available to study cognitive-neuromotor effects of psychotropic drugs. Involves assessment of relationship of pharmacodynamics to pharmacokinetics. Background in behavioral pharmacology desirable. Send curriculum vitae and names of three references to: **Everett H. Ellinwood, Jr., M.D., Box 3870, Duke University Medical Center, Durham, N.C. 27710.**

POSTDOCTORAL POSITION is available immediately to study the mechanism of free radical injury to cells. The position is funded through an NIH grant and is available for 2 years. Send curriculum vitae to:

Dr. Gerald M. Rosen
Department of Pharmacology
Duke University Medical Center
Box 3813
Durham, N.C. 27710

Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL RESEARCH POSITION available to participate in x-ray and neutron diffraction/scattering studies of the structural organization of native and reassembled plasma lipoproteins. A strong background in diffraction/scattering methods as applied to structure determination of biological macromolecules is required. Send curriculum vitae and two letters of reference to: **David Atkinson, Ph.D., Biophysics Institute, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN VIROLOGY

Available for research on biological characterization and cellular immunology of human enteric and respiratory viruses. Virologic experience with purification, protein analysis, and immunological assays essential. Send curriculum vitae and names of three references to: **Dr. Neil R. Blacklow, Division of Infectious Diseases, University of Massachusetts Medical School, Worcester, Massachusetts 01605.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to study renal patho-physiology and toxicology. Background should include experience in transmission electron microscopy and renal physiology. Send curriculum vitae and the letters of recommendation to: **Ruth Ellen Bulger, Ph.D., GSBS, The University of Texas Health Science Center, Renal Laboratory, MSMB 7242, P.O. Box 20708, Houston, Texas 77225.** *An Equal Opportunity Employer. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITION NMR IMAGING CONTRAST AGENTS

Two or 3-year position available immediately for development of clinically useful contrast agents for NMR imaging. Send résumé to: **Dr. Monte Blau, Harvard Medical School, Radiology Department, Brigham and Women's Hospital, 75 Francis Street, Boston, Mass. 02115.**

POSTDOCTORAL POSITIONS AVAILABLE 1 July 1985

Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, Mass. 02111.

1) To study the structure and function of the proton pump in clathrin-coated vesicles and the role of acidification in receptor-mediated endocytosis. Experience in membrane protein chemistry and/or raising antibodies desirable. Send applications to: **Dr. Michael Forgac.**

2) To study functional polarity in the plasma membrane of hepatocytes in relation to transport and regeneration. Experience in biochemistry and membrane biology is desirable. Send applications to: **Dr. Irwin M. Arias.**

3) To study the cellular mechanisms of lysosome biogenesis and receptor-mediated endocytosis. The laboratory is using a combined molecular and cell biology approach to investigate basic cellular processes related to the synthesis and function of subcellular organelles. Studies involve the use of recombinant DNA techniques, biosynthetic labeling methodology, immunological methods, subcellular fractionation and HPLC. A Ph.D. in biochemistry or molecular biology is required. Send curriculum vitae and a description of previous research experience to: **Dr. Gary Sahagian.**

A **POSTDOCTORAL POSITION** is available immediately to study functional role of insulin in the brain at the cellular level with **Dr. D. W. Clarke** and **Dr. M. K. Raizada.** Experience in cell culture and biochemical techniques is desirable. Experience with immunocytochemistry would be helpful. Contact: **Dr. Mohan K. Raizada, Department of Physiology, J-274, University of Florida, Gainesville, Fla. 32610,** or telephone: 904-392-3791.

POSTDOCTORAL POSITION available 1 July 1985 to study the biochemical and genetic basis of virulence of the plant pathogen *Pseudomonas solanacearum*. Cooperative project with **Dr. Mark Schell,** University of Georgia, Microbiology Department. Experience in molecular genetics and recombinant DNA techniques required; plant pathology background helpful. Salary is \$18,000 for 2 years. Send résumé and three references to: **Dr. Tim Denny, Plant Pathology Department, Plant Science Building, University of Georgia, Athens, Ga. 30602.** *Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS available immediately in the area of molecular immunology to study the biochemistry of the T-cell antigen receptor and its association with other T-cell differentiation antigens. Candidates should have experience in protein biochemistry. Send curriculum vitae, statement of research interests, and names and addresses of three references to: **Chris Platsoucas, Ph.D., Department of Immunology, M. D. Anderson Hospital, 6723 Bertner—HMB 178, Houston, Texas 77030.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATES

CARDIOVASCULAR PHYSIOLOGY/ PHARMACOLOGY

McNeil Pharmaceutical, a Johnson & Johnson Company, is a well-established and highly respected leader in the ethical pharmaceutical field. We currently have two challenging opportunities for Research Associates; both positions require a Master's degree or equivalent and experience relevant to the following responsibilities:

- Research on *in vitro* preparations of vascular smooth muscle for measurement of excitation-contraction coupling and calcium flux by the radiolabel or photosensitive techniques. Experience with biochemical assays (cyclic AMP & cyclic GMP) and microprocessors for laboratory automation desirable.
- Research on *in vivo* preparations of recovered rodents for evaluation of cardiovascular dynamics and cardiac output distribution using the radioactive microsphere technique. Small blood vessel cannulation. Experience with biochemical assays and microprocessors for laboratory automation desirable.

These positions offer opportunity for professional growth, a competitive salary, the benefits of a Johnson & Johnson Company and a convenient suburban Philadelphia location. For immediate consideration, please send curriculum vitae and salary requirements in confidence to: **Stephen F. Flaim, Ph.D.**, c/o Personnel Department, McNeil Pharmaceutical, Spring House, PA 19477-0776.



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UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY (ACDA)

Physical Scientist
GS-13/14, \$37,599 to \$57,759 per annum
(Two Positions)

The U.S. Arms Control and Disarmament Agency, Washington, D.C., Verification and Intelligence Bureau, Verification Division.

The physical scientist assures that proposed arms control treaty provisions have allowed for effective verification of treaty compliance and that verification methods for existing treaties are effective. This includes treaties related to strategic and intermediate range nuclear weapons, nuclear testing, space systems, ballistic missile defense, chemical/biological warfare, and conventional forces. Specifically, the incumbent reviews and analyzes proposals for treaty negotiations; prepares assessments of verifiability and other information as required by Section 37 of the Arms Control and Disarmament Act (as amended); formulates and monitors external research projects; and drafts policy analysis and technical briefing papers representing the U.S. (ACDA) position on sensitive problems in areas such as arms compliance, verifiability, and compliance with negotiated agreements. He/she serves as ACDA representative on inter-agency arms control working groups including State, Defense, and National Security Council participants. He/she provides definitive technical and scientific judgments which serve as key inputs in policy recommendations and decisions on matters of critical national security interest.

Qualifications: Candidates must show successful completion of a full 4-year or longer curriculum in an accredited college or university leading to a bachelor's or higher degree in physical science, engineering or mathematics that included 24 semester hours in physical science and/or closely related engineering science such as mechanics, dynamics, properties of materials and electronics. In addition to the basic requirements, candidates must have 3 years of specialized experience with at least 1 year of the required experience at a level of difficulty comparable to that of the next lower grade in the federal service.

Procedures: Applicants should call the ACDA Personnel Office at 202-632-2034 to request a copy of Vacancy Announcement Number 85-15 and a Personal Qualifications Statement (Standard Form 171). Applications will be accepted for this position through 30 June 1985. Resumes will not be accepted in lieu of the Personal Qualifications Statement.

U.S. citizenship is required. The selected candidate(s) must have been granted a top secret level security clearance by ACDA prior to entry on duty. The basic eligibility requirement for this clearance is a recent full-field background investigation completed with favorable results by the U.S. Office of Personnel Management.

Civil service status is not required. *The U.S. Arms Control and Disarmament Agency is an Equal Opportunity Employer.*

U.S. PUBLIC HEALTH SERVICE EPIDEMIOLOGY TRAINING PROGRAM—1986

The U.S. Public Health Service (USPHS) invites applications for a planned extension of a training program in medical epidemiology. Up to eleven (11) persons per year, who already have an M.D., a doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science (e.g., biochemistry, psychology, etc.), or equivalent, may be accepted as service fellows of the USPHS (a non-tenured, junior professional classification under civil/service) for up to a three-year period of duty. Applications received by *September 10, 1985* may be considered for service to begin between July 1, and September 1, 1986.

During the first year, each successful applicant will attend a university at government expense to study epidemiology, biostatistics, and related subjects. This course work should be creditable toward, but will not necessarily complete requirements for, a degree in public health. During the subsequent two years, individuals will work in association with senior epidemiologists in the participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration; Food and Drug Administration; National Center for Health Statistics; and the National Institutes of Health) primarily in research studies. A matching procedure akin to the National Internship Matching will be employed to assure that each individual is assigned to a preceptor whose area of expertise is of interest to the trainee, and consistent with his/her career plans.

Salaries will be provided according to the scale in effect for staff fellows in intramural research at ADAMHA and NIH. The current schedule of remuneration for a physician to be recruited in 1986 is \$30,000 per annum for the first year, (\$21,000 for a non-physician). Educational costs and (allowable) relocation expenses for the first year are provided in addition.

Basic requirements for application to the program are:

1. M.D., doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science, or equivalent, *and* one year of post-doctoral training or experience (by July 1, 1986).
2. *U.S. citizenship* at time of application.
3. Acceptability to an accredited university offering an M.P.H. or equivalent, or more advanced public health degree.

To obtain further program details and application forms, *send a postcard only*, with your *printed* name and home mailing address to:

Robert S. Gordon, Jr., M.D., M.H.S.
Chairman, Steering Committee
NIH, Building 1, Room 238
Bethesda, Maryland 20205

Please . . . *do not send* letters, curriculum vitae, resumes, transcripts, reprints, etc., until you have received the instructions for submission and completed the application form.

THE USPHS IS AN EQUAL OPPORTUNITY EMPLOYER

POSTDOCTORAL POSITION

Merck Sharp & Dohme Research Laboratories is currently seeking a candidate for a Postdoctoral Fellowship in the Department of Biophysics.

The candidate should have a Ph.D. degree with training in cardiovascular physiology (or pharmacology) or in biomedical applications of NMR spectroscopy, and an interest in gaining proficiency in the other specialty. The individual will join a group actively using ^{31}P and ^{13}C NMR in the study of metabolism in whole perfused organs and isolated cells. Research activities will be directed towards the mode of action of hormones and drugs on cardiac function and metabolism in the working heart perfusion and ischemic heart models.

Salary and benefits are excellent. Please send resume and three letters of reference to: Susan R. Jenkins, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey, 07065.

EEO/AA/VH/Employer



Merck & Co., Inc.

MANAGING EDITOR for Technology Review

MIT's national magazine of technology and its implications (circ. 75,000). Major responsibilities: soliciting and evaluating articles; writing and editing for non-technical readers; managing staff and day-to-day operations; helping set editorial direction and style. Requirements: considerable experience writing and editing for newspaper and/or magazine; strong managerial skills; and familiarity with science and - especially - technology and related policy issues.

Send 2 copies of resume and a cover letter to: Mr. Richard Higham, MIT Personnel Office, 77 Massachusetts Ave., E19-239, Cambridge, MA 02139. Refer to Job #A85-545. MIT is an equal opportunity/affirmative action employer.

MIT

POSITIONS OPEN

POSTDOCTORAL POSITION

To study intracellular processing of alphavirus protein and the assembly of alphavirions. Experience in recombinant DNA technology desirable. Send curriculum vitae to: Dr. Dennis T. Brown, Cell Research Institute, The University of Texas at Austin, Austin, Texas 78713. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available beginning January 1986 to study the molecular and genetic basis of *Drosophila* muscle development [see *Nature* 302 393]. Background in *Drosophila* genetics and recombinant DNA techniques helpful, but not required. Salary: \$17,000 to \$19,000 (depending on experience) plus some benefits. Send curriculum vitae, brief description of research experience, and names of three references to: Dr. Sanford Bernstein, Biology Department, San Diego State University (SDSU), San Diego, Calif. 92182. SDSU is an Affirmative Action/Equal Opportunity/Title IX Employer and does not discriminate against handicapped persons.

POSTDOCTORAL POSITION in macrophage research available to investigate the interaction of herpes simplex virus with macrophages. Research on molecular regulation of HSV replication in different macrophage populations, and delineation of molecular aspects of macrophage differentiation/activation associated with variable permissiveness for virus replication. Recombinant DNA technology and molecular biology experience, experience with herpes viruses or macrophages desirable. Submit curriculum vitae and names of three references by 15 June 1985 to: Dr. Page S. Morahan, Professor and Chairman, Department of Microbiology and Immunology, THE MEDICAL COLLEGE OF PENNSYLVANIA, 3300 Henry Avenue, Philadelphia, Pa. 19129. Equal Opportunity Employer, M/F.

POSTDOCTORAL POSITION at Harvard Medical School available immediately in the Mailman Research Center of McLean Hospital. Research deals with the neurobiology of protein and neuropeptide metabolism and the role of proteolysis in neuropsychiatric disorders in aging. Particular emphasis is on the neuronal cytoskeleton. Experience or interest in one of the following areas is desired: immunocytochemistry, RIA, immunocytochemistry, tissue culture, and protein purification and characterization. Address curriculum vitae and letters of reference to: Ralph A. Nixon, M.D., Ph.D., Mailman Research Center, Ralph Lowell Laboratories, McLean Hospital, 115 Mill Street, Belmont, Mass. 02178. An Equal Opportunity Employer.

TWO POSTDOCTORAL RESEARCH ASSOCIATE POSITIONS available: (i) to study the effects of alcohol exposure on the developing brain (Fetal Alcohol Syndrome); and (ii) to study the effects of chronic alcohol exposure on lesion-induced sprouting and recovery of function. For both positions, neuroscience training including experience with stereotaxic surgery, brain lesions, and the use of microcomputers is preferred. In addition, experience with artificial rearing procedures and environmental stress is an advantage for the first position, and experience with behavioral testing is an advantage for the second position. Salary range: \$15,540 to \$19,297; excellent benefits. Send curriculum vitae and three letters of recommendation to: Dr. James R. West, Alcohol and Brain Research Laboratory, Department of Anatomy, College of Medicine, University of Iowa, Iowa City, Iowa 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATE POSITION IN MOLECULAR BIOLOGY available immediately to work in eukaryotic genetics. Applicant should have experience in DNA sequencing, cloning and gene expression. Teaching responsibilities will be required for teaching in the Molecular Resource Center. Applicant must have a Ph.D. degree in molecular biology with 3 years of postdoctoral training and 2 to 3 years of experience in eukaryotic genetics. Salary range: \$15,000 to \$22,000. Those interested should submit resume, a statement of research and teaching experience, and three letters of reference to:

Dr. Terrance G. Cooper
University of Tennessee Center
for the Health Sciences
Department of Microbiology and Immunology
858 Madison Avenue, Room 801
Memphis, Tennessee 38163

POSITIONS OPEN

THREE POSTDOCTORAL POSITIONS will be available at the University of Georgia's Savannah River Ecology Laboratory beginning fall 1985.

ENVIRONMENTAL INORGANIC CHEMISTRY: Conduct research with a team of scientists studying the mechanisms of heavy metal mobilization and transfer through soil-plant systems and/or aquatic systems, and how these mechanisms are influenced by chemical interactions and environmental factors.

ALUMINUM CHEMISTRY: Conduct research with a team of scientists studying the release of aluminum from various soil mineral phases, and how this release may be affected by acid precipitation. Experience with radioisotope techniques is desirable.

ENVIRONMENTAL ORGANIC CHEMISTRY: Conduct research with a team of scientists studying the mobilization and transfer of trace organic compounds through terrestrial and/or aquatic systems and how these processes are influenced by chemical interactions and environmental factors.

Applicants must be U.S. citizens and have a Ph.D. with emphasis in environmental chemistry, soil chemistry, aquatic chemistry, or related areas. Training and experience are required in the analysis of heavy metals and/or trace organic compounds. Deadline for submitting applications is 30 June 1985. Applicants should specify the position(s) for which they are applying, and submit their curriculum vitae, appropriate reprints, and the names, addresses, and telephone numbers of four references to: Dr. Carl L. Strojjan, Savannah River Ecology Laboratory, Drawer E, Aiken, S.C. 29801.

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

POSTDOCTORAL POSITION IN NEUROBIOLOGY

Opportunity to participate in program investigating autonomic function in the lumbosacral spinal cord. Experience with electron microscopy, immunohistochemistry, and microelectric recording techniques desirable. Position available for 1 or 2 years. Salary: \$17,824. Interested persons send resume and curriculum vitae to: Irving Nadelhaft, Ph.D., VA Medical Center, University Drive C, Pittsburgh, Pa. 15240. Telephone: 412-683-3000, extension 514. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH POSITION is available to study the molecular biology of the enzymes involved in connective tissue degradation. A research background in biochemistry or molecular biology is advantageous. Applicants should send curriculum vitae and three references to: Gregory I. Goldberg, Ph.D., Washington University School of Medicine, Box 8123, St. Louis, Missouri 63110. Equal Opportunity/Affirmative Action Employer.

PSYCHOLOGIST, Ph.D., immediate opening in psychophysiology laboratory, for grant-supported research on postural hypotension and blood pressure discrimination. Preference will be given to person with computer programming and electronics capabilities. Please telephone 213-825-0252, or write: David Shapiro, Ph.D., University of California, Los Angeles, Department of Psychiatry, 760 Westwood Plaza, Los Angeles, Calif. 90024.

RESEARCH ASSOCIATE POSITION available immediately to study the dynamics of membrane phase transitions using a novel volume-perturbation kinetic calorimeter which we have developed. We are seeking a person with a Ph.D. in biochemistry, biophysics, or related field for a research associate position to work on this project.

Our calorimeter measures the thermodynamic phenomenon associated with phase transitions in membrane systems via temperature and pressure changes and optical properties. The person we seek must be able to synthesize artificial lipid membranes in pure form and mixed with other constituents, and be able to reconstitute protein recombinant systems so the proteins retain their native functions. This person will conduct experiments, do some hardware modification, and modify and use computer software for data acquisition and experimental analysis.

The individual must have a working knowledge of membrane systems. He/she must also be experienced with computer hardware and software methods for data acquisition, instrument control, data analysis, and modeling studies.

Send curriculum vitae and names of references to: Dr. Michael L. Johnson, Department of Pharmacology, University of Virginia, Charlottesville, Virginia 22908. An Equal Opportunity/Affirmative Action Employer.

START-UP OPPORTUNITIES FOR RESEARCH SCIENTISTS

Sepracor is pioneering advances at the interface of the biological sciences and membrane technology. Our new products, based on bioactive membranes, have applications in industrial bioconversion/bioseparation processes, in extracorporeal blood processing, and in hybrid artificial organs. We seek to attract creative, well qualified Scientists and Engineers who will share in the commitment and excitement of a young, growing company. We have positions available in the following areas of specialty offering group/project leader responsibilities; all offer a challenging and stimulating work environment in the Boston Area.

POLYMER CHEMIST: This position requires a PhD in Polymer or Physical Chemistry and experience in the synthesis and characterization of hydrophilic, functional, and/or biocompatible polymer systems.

MEMBRANE CHEMIST/ENGINEER: This position requires a PhD in Polymer Chemistry or Chemical Engineering and several years experience in development and characterization of membrane structures and surfaces.

PROTEIN BIOCHEMISTS: We currently have two openings for PhD level candidates with particular interests in enzymology and immunochemistry. These individuals will have experience in the purification, characterization, and immobilization of proteins, as well as in their industrial and biomedical application.

CHEMICAL/BIOCHEMICAL ENGINEER: This MS/PhD level individual will have 2-5 years experience and a track record as an innovator in state-of-the-art bioconversion and bioseparation process technology.

BIOMEDICAL ENGINEER: This individual will have a record of successfully developing, manufacturing, and gaining FDA approval for critical biomedical devices; ideally, the candidate will have a strong background in biomedical materials.

PROCESS ENGINEER: This individual will have 2-5 years experience in manufacturing engineering and production of hollow-fiber membranes and devices at the pilot plant scale. MS Chemical or Mechanical Engineering required.

We provide competitive salaries and company paid benefits. Please send your resume and salary history to: Mrs. Priscilla Hendricks, Personnel Manager, Sepracor Inc., 300 Wall Street, Princeton, NJ 08540. An equal opportunity employer m/f.



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POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION IN CERAMICS at Rutgers, The State University of New Jersey. The appointment would be made jointly within the Center for Ceramics Research and The Center for Composite Manufacturing Science and Engineering (NSF Engineering Research Center). A unique opportunity exists for conducting original research in laboratories with state-of-the-art equipment in a setting with very close industrial interaction and support. The ability to carry out first quality scholarly research in one of the following areas is required:

- 1) Polymer chemistry/rheology for injection molding.
- 2) Computational analysis and materials modeling of thin film and/or composite ceramic materials.

Initial appointment is for 2 years. Those interested please send curriculum vitae along with lists of publications and three references to:

Professor S.C. Danforth
P.O. Box 909
Rutgers University
Piscataway, New Jersey 08854

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PRESIDENT—EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES

Qualifications: knowledge of U.S. and internal medical education, administrative experience in U.S. graduate medical education, demonstrated leadership, understanding of principles of testing of medical knowledge. Responsibilities: chief executive officer, administer programs, develop and maintain effective relationships with medical educational institutions in United States and abroad, foundations, U.S. and foreign government agencies, and other organizations with interests in international medicine. Address inquiries and applications to: **Madison B. Brown, M.D., Chairman ECFMG Board of Trustees**, P.O. Box 8266, Philadelphia, Pa. 19101-8266. *Equal Opportunity Employer.*

PRODUCT DEVELOPMENT SPECIALIST

Carolina Biological Supply Company is seeking a developer of educational kits and other products in the area of human-oriented physiology. Strong communications skills and a thorough knowledge of basic and advanced laboratory teaching practices are essential. Familiarity with microcomputers and an interest in solid-state electronics will be highly useful. The successful candidate will be a self-motivated, creative individual (M.S. or Ph.D. preferred) who wishes to be part of a small, dynamic research and development team. Send curriculum vitae and transcripts to: **Personnel Director, Carolina Biological Supply Company, 2700 York Road, Burlington N.C. 27215.** *An Equal Opportunity Employer.*

TWO RESEARCH ASSOCIATE POSITIONS available immediately. Experience in proteins and recombinant DNA. Salary \$18,000 to \$22,000. Send curriculum vitae and three references to: **Dr. O. P. Bahl, Department of Biological Sciences, State University of New York at Buffalo, Cooke Hall 347, Buffalo, N.Y. 14260.** *Equal Opportunity/Affirmative Action Employer.*

RESEARCH GENETICIST/RESEARCH CHEMIST with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS). Position located at Clay Center, Nebraska. Incumbent will conduct research on genetic basis for disease resistance and genetic linkage of polymorphic traits to parameters associated with efficient livestock production. Incumbent will apply principles of histocompatibility and/or molecular genetics. Career Federal Service, GS-12/13/14 (\$30,549 to \$55,087); salary based on qualifications and experience. *An Equal Opportunity Employer.* For information, contact: **Dr. Larry Cundiff, USDA-ARS-CPA, Meat Animal Research Center, Box 166, Clay Center, Neb. 68933; telephone: 402-762-3241.** For applications, contact: **Lee Triplet, telephone: 301-344-1863.**

SENIOR RESEARCH POSITION available 1 July in the field of excitation-contraction coupling in muscle. Electrophysiologist with recognized experience in charge transfer mechanisms preferred. Institution will contribute approximately half salary. Send curriculum vitae to: **Department of Biochemistry, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, Md. 21201.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

RESEARCH ASSISTANT, ASSOCIATE OR PROFESSOR: Position available at rank of research assistant, associate, or professor in the Transplantation Division of the Department of Surgery at the State University of New York (SUNY) at Stony Brook for M.D. or Ph.D. with established record of publications and research activity. Candidate will be involved in a clinical and research program in transplantation and immunology with special interest in immunogenetics, cellular immunology, and microbiology. Salary is commensurate with academic rank. Send résumé to: **Harry S. Soroff, M.D., Professor and Chairman, Department of Surgery, School of Medicine, SUNY, Stony Brook, Stony Brook, N.Y. 11794-8191.** *SUNY, Stony Brook, is an Affirmative Action/Equal Opportunity Educator and Employer.* AK Number 111C-85.

RESEARCH ASSOCIATE POSITION. Opportunity exists to work on a project concerned with the biochemical mechanisms of hormone (insulin) action to control phosphorylation and redox state. Applications are invited from qualified candidates with a Ph.D. or M.D. degree. Submit a résumé of research interests, curriculum vitae, and three letters of recommendation to: **Dr. Joseph Larner, Department of Pharmacology, Box 448, University of Virginia School of Medicine, Charlottesville, Virginia 22908.** *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSOCIATE position available in the area of plant physiology/molecular biology for research on dormancy in plants. Ph.D. and relevant experience preferred. Write for more information or send curriculum vitae and names of references to: **Dr. M.E. Foley, Department of Plant and Soil Science, Montana State University, Bozeman, Mont. 59717.** *Affirmative Action Employer.*

RESEARCH LEADER/MYCOTOXIN RESEARCH

The Northern Regional Research Center, U.S. Department of Agriculture (USDA), is seeking an established scientist for the position of research leader in mycotoxin research. The individual will be responsible for supervising 10 to 15 scientists doing research involving genetics, analytical chemistry, biochemistry, ecology, and microbiology of agriculturally important mycotoxin-forming organisms and on the prevention or elimination of toxins from food and feed chains. The incumbent is expected to develop long-term research goals and to coordinate research activities of the team. The successful candidate will have at least 5 to 10 years of post-Ph.D. research or equivalent experience and a substantial publication record. Knowledge of and experience in fungal genetics, physiology, biochemistry, fungal ecology, and molecular biology are essential.

The position is GS-13/14/15 and starting salary will be established between \$37,599 and \$67,940, depending on candidate's qualifications. Send résumé to: **USDA-ARS Midwest Area, Personnel Section, Northern Regional Research Center, 1815 North University Street, Peoria, Ill. 61604. Telephone: 309-685-4011, extension 632.** *The USDA is an Affirmative Action/Equal Opportunity employer.* U.S. citizenship is required.

ZOOLOGIST/MOLECULAR BIOLOGIST

The Department of Biological and Environmental Science of California University of Pennsylvania has a vacancy for an instructor or assistant professor in the area of vertebrate zoology/molecular biology. This is a full-time, tenure-track position. Applications will be considered from individuals who possess the doctorate degree. The successful candidate will demonstrate proven research abilities and will be expected to teach courses in vertebrate zoology, human anatomy, and molecular biology at the graduate and undergraduate levels. (Additionally this person will be expected to participate actively as an advisor to students and serve on departmental, campus-wide and professional faculty committees and organizations.) Rank and salary will be at the instructor or assistant professor level dependent upon the training and experience demonstrated by the successful candidate. Applications will be accepted until 30 June 1985. Applicants should submit curriculum vitae, official transcripts, and a minimum of three and no more than five letters of recommendation to: **Dr. M.A. Sylvester, Chairperson, Department of Biological and Environmental Sciences, California University of Pennsylvania, California, Pa. 15419.** *California University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer and is actively seeking applications from minorities.*

POSITIONS OPEN

RESEARCH ASSOCIATE

A leading pediatric medical center has an opening for an individual to perform mixed lymphocyte cultures, to develop methods for the monoclonal antibody purging of human bone marrow for transplantation, to cryopreserve human bone marrow, and to identify leukemic cells by monoclonal antibody staining. Position requires California medical technology license or eligibility, a Ph.D. in immunology or 3 years of experience in immunology research. Please send résumé in confidence to: **CHILDRENS HOSPITAL OF LOS ANGELES, 4650 Sunset Boulevard, Los Angeles, Calif. 90027, Attention: Personnel.** *Equal Opportunity Employer, M/F/H.*

REQUESTS FOR PROPOSALS

REQUEST FOR PROPOSALS. The Paralyzed Veterans of America (PVA) Spinal Cord Research Foundation is now accepting grant proposals in the areas of technological, applied medical, and psychosocial research. The deadline for submission of grant proposals is 1 July 1985. Contact: **Jacqueline Taylor, telephone: 202-USA-1300,** for guidelines and application.

AWARDS

ARTHRITIS RESEARCH AWARDS. The Southern California Chapter of the Arthritis Foundation is instituting Arthritis Research Awards of up to \$100,000 each to provide support to a physician(s) or other scientist(s) (M.D.'s or Ph.D.'s) conducting an innovative biomedical research project relevant to the rheumatic diseases. Funded research must be conducted within the Southern California Chapter area. Applications from sources not traditionally funded by the Arthritis Foundation are encouraged. For applications, write: **Arthritis Foundation, 4311 Wilshire Boulevard, Los Angeles, Calif. 90010, attn: Diane Ross-Simon,** or telephone: 213-938-6111.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP—Available at the University of California (UC) Cancer Center in San Diego to work on the development of chimeric monoclonal antibodies. Applicants should have a Ph.D. in molecular biology preferably with some experience in immunoglobulin gene manipulation. *An Affirmative Action/Equal Opportunity Employer.*

Send résumé and three references to:
Dr. Ivor Royston, T-011
UC San Diego Cancer Center
University of California, San Diego
San Diego, Calif. 92103

POSTDOCTORAL FELLOWSHIP

Laboratory of Psychoneuroendocrinology
Duke University Medical Center

Focus is on the role of neuropeptides in neurobiology with a special emphasis on alterations in neuropeptide systems in neuropsychiatric disorders. A multidisciplinary approach is taken to study the role of neuropeptides in the mammalian CNS. Exposure to clinical neuropsychiatry is available and encouraged. M.D. and/or Ph.D. required. Available 1 July 1985. Send three letters of recommendation, including curriculum vitae, to: **Charles B. Nemeroff, M.D., Ph.D., Departments of Psychiatry and Pharmacology, Box 3859, Duke University Medical Center, Durham, N.C. 27710.** *An Equal Opportunity Employer.*

The California Institute of Technology, Division of Engineering and Applied Science, invites applications for:

THE DR. CHAIM WEIZMANN POSTDOCTORATE FELLOWSHIPS FOR SCIENTIFIC RESEARCH

Caltech's Division of Engineering and Applied Science will award a limited number of Dr. Chaim Weizmann Postdoctorate Fellowships for Scientific and Engineering Research. The fellowship will have a 1- to 3-year duration, beginning in fall 1985. The program is restricted to U.S. citizens under the age of 30.

Inquiries should be addressed to: **Professor Paul C. Jennings, Chairman, Division of Engineering and Applied Science, California Institute of Technology, Pasadena, Calif. 91125.** *The Institute is an Equal Opportunity/Affirmative Action Employer and welcomes applications from women and minorities.*

Molecular Biologists

Battelle Columbus Laboratories, a world leader in contract research and development, has two openings for experienced Molecular Biologists to work on genetic engineering of proteins, including enzymes, peptide hormones, and viral antigens.

A Ph.D. in Molecular Biology or Biochemistry and a minimum of 5 years related postdoctoral experience are required for these challenging positions. Experience with peptide production using eukaryotic gene cloning/expressions systems preferred. The successful candidate must have excellent communication skills, R&D project management experience, and interest in the commercial application of molecular biology.

Battelle offers competitive salaries and comprehensive benefits. Qualified candidates interested in this challenge should send their resumes, to: **Virginia Tyler, Department, A-3, BATTELLE COLUMBUS LABORATORIES, 505 King Avenue, Columbus, Ohio 43201-2693.** An equal opportunity employer, m/f/h.



Battelle

Columbus Laboratories



THE MARINE BIOLOGICAL LABORATORY

announces

BASIC IMMUNOCYTOCHEMICAL TECHNIQUES IN TISSUE SECTIONS AND WHOLE MOUNTS

SEPT. 30 - OCT. 5, 1985

**Faculty: Barbara Beltz, Harvard Medical School,
and Gail Burd, Rockefeller University.**

This one-week course provides intensive experience with the principles and current technologies of immunocytochemistry. Prior experience in the field is not required, however participants are expected to have a legitimate research requirement for the methods.

For application materials and additional information, please contact the Office of Grants and Educational Services, Marine Biological Laboratory, Woods Hole, MA 02543. (617) 548-3705 x 216.

NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

OPENING DATE: June 1, 1985 CLOSING DATE: June 30, 1985

(All applications must be postmarked before closing date.)

Director, Division of Research Services

The National Institutes of Health invites nominations and applications for the position of Director, Division of Research Services (DRS). The Director, DRS, provides leadership to an organization that provides the following centralized services to the Bureaus, Institutes, and Divisions of the National Institutes of Health; provision of research animals, facilities for their care and use, and disease control services; biomedical engineering and instrumentation services; medical library and translating services; and medical illustration, design graphics and photographic services. DRS has approximately 450 employees and a budget of \$32 million.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from 61,296 to 68,700 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. Alternately, 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 SES, must serve a one-year probationary period.

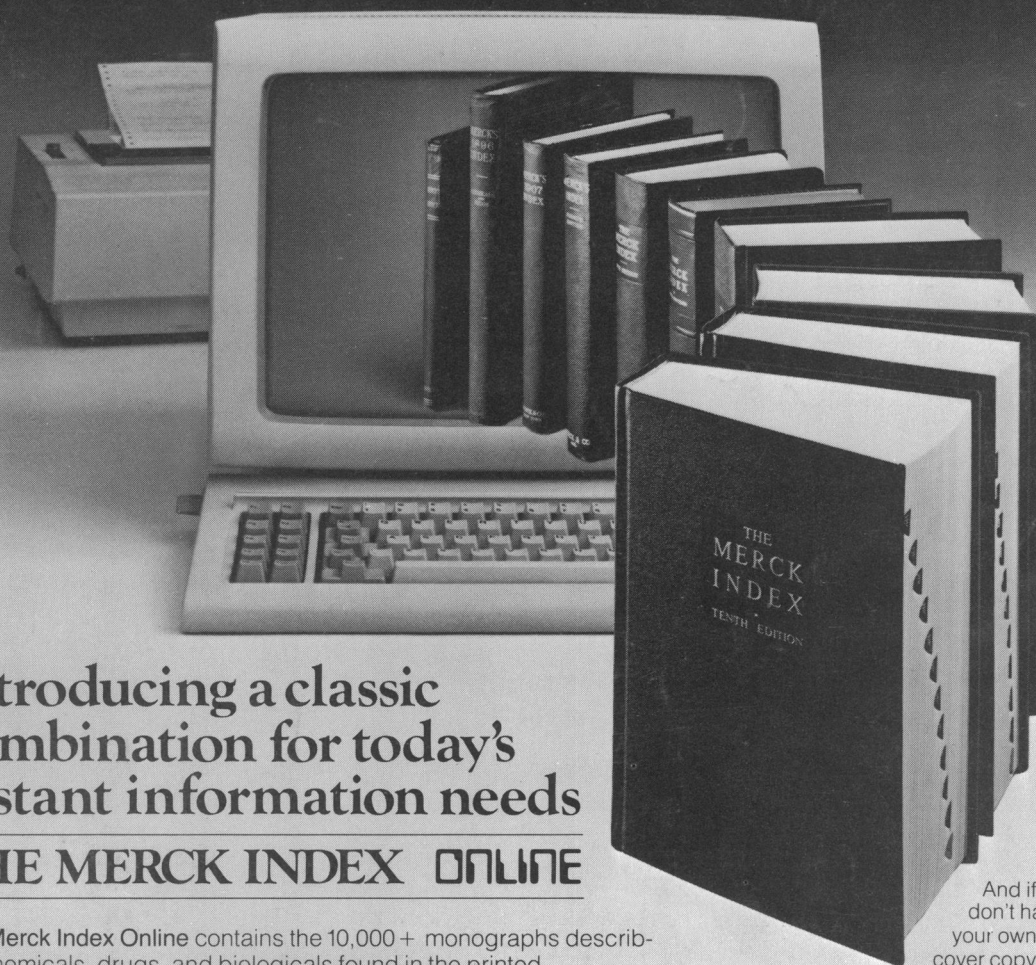
Candidates must meet the minimum educational requirements for Veterinary Medical Officer, GS-701; Professional Engineer-

ing Series, GS-800 (Mechanical, Electronics, Biomedical, Chemical); or Physical science Series GS-1301, as defined by the U.S. Office of Personnel Management Handbook X-118 Qualification Standards for Positions under the General Schedule, which is available in Federal Personnel Offices and Federal Job Information Centers.

Candidates will be further evaluated by the Search Committee on the following desirable factors: scientific recognition/peer recognition; research experience and leadership; communications and interpersonal skills; education and training; and honors and awards. Information on any of the above requirements may be obtained by calling Ms. Helen C. Stafford at (301) 496-4197 and requesting a formal vacancy announcement.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Ms. Helen C. Stafford, Executive Secretary, Search Committee for Director, DRS, Shannon Building, Room 19, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

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