

sity, spatial and temporal heterogeneity, and succession. As with the parts of the book dealing with consumers and competitive interactions, a traditional approach is taken that stresses methodology and select case studies. The cases presented are all recent and generally well explained, but in contrast to the treatment of ecosystem-level processes the discussion of community-level processes is uninspiring. The current controversies concerning nonequilibrium communities, disturbance-maintained communities, and the application of island biogeography theory to marine communities are largely neglected.

In spite of these limitations readers are in most cases directed, in a bibliography over 70 pages long, to current literature reflecting a wide variety of perspectives on how marine systems are viewed. On balance, this book has much to offer as a textbook. As a comprehensive treatment of marine ecology at this level it really has no predecessors, and would-be marine ecologists would be well served by reading it. Its distinct systems ecology flavor will be less acceptable to some potential users than to others. Nonetheless, I expect that the book will find a grateful readership, particularly among biological oceanographers, and that its compilation of literature will be widely appreciated.

MARK D. BERTNESS

Section of Population Biology and Genetics, Brown University, Providence, Rhode Island 02912

Lichen Biology

Biology of Lichenized Fungi. JAMES D. LAWREY. Praeger, New York, 1984. x, 408 pp., illus. \$39.95.

The some 25,000 known species of lichen-forming fungi and their algal partners constitute the classical textbook example of symbiosis. As the only fungi with "chloroplasts," the lichen-formers flourish where few other organisms can—on boulders above the timberline, on soil in burning deserts, on maritime cliffs sprayed with salt, even inside translucent rocks in Antarctica. Lichens are also epiphytes of higher plants in all parts of the world that we have not spoiled by air pollution (their sensitivity in this regard is even used as a measure of pollution). The fungus-alga relationships that coevolution has so finely tuned are still only sketchily known. Lichens, you might think, must consequently fascinate biologists to distract

tion—but they do not. They are generally considered to be too difficult taxonomically for field research and too intransigent for laboratory manipulation. To improve the lichens' scientific reputation is Lawrey's ambition in his admirable new book.

Lawrey draws upon a bibliography of more than 900 references, many from obscure and unlikely sources. A large percentage of the papers that he cites are not included in other recent surveys of lichenology. He summarizes the major points known about the lichen thallus (scanning electron microscopy reveals structures useful in refining taxonomies), asexual and sexual reproduction (yet not a single chromosome number is known), in vitro culture for experiments (hard, yes, but an increasing number of workers are succeeding), physiology (imagine daily photosynthetic cycles governed by the availability of water), secondary-product chemistry (hundreds of the compounds are unknown elsewhere in nature), growth and demography (what is an individual?), and ecology (are the many chemical races ecotypes or cryptospecies?).

Lawrey juxtaposes sets of data that we have not previously been forced to compare. Not content to leave it to us to formulate new hypotheses, he strews his text with tables bearing such titles as "Questions concerning the biological basis of lichen growth," making up lists of research projects, most of which are entirely feasible today. "This hypothesis needs to be tested experimentally" becomes the chorus that concludes one section after another. The book is an invitation—actually a challenge—to research.

In the chapter on the ecological significance of secondary products Lawrey is at his best, explaining the field of his own research. Although most lichens have only momentary periods of photosynthesis, they still spend vast sums of hard-won photosynthate to elaborate their bizarre extracellular secondary compounds. Lawrey explores the evidence that these substances have allelopathic effects on bryophytes and higher plants and act as deterrents against a wide range of invertebrate grazers. In all, the lichen is remarkably immune to micro- and macrobiological predators. This aspect of lichen ecology is in its infancy, but Lawrey is its chief researcher and most imaginative spokesman.

From an editorial perspective, the book is a botch. Most of the many photographs, which looked fine in the papers of their provenance, are now so overexposed as to be uninterpretable. The line

drawings, which could have been made presentable with some reduction, are published at what must be original size and look hopelessly crude. An eye blind to the beauty of the printed page selected the typography. (Were copies with defective bindings intentionally used for review?) Scientific authors in search of a publisher might well want to consider what Praeger did to Lawrey.

The verso of the title page tells us that *Biology of the Lichenized Fungi* is printed on acid-free paper. This precaution was unnecessary. Long before time will be able to erode it, the book will be obsolete thanks to the broad range of research that it is certain to inspire.

WILLIAM LOUIS CULBERSON

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Durham, North Carolina 27706*

Books Received

Advances in Experimental Social Psychology. Vol. 17, Theorizing in Social Psychology: Special Topics. Leonard Berkowitz, Ed. Academic Press, Orlando, Fla., 1984. xiv, 439 pp. \$47.50.

American Arms Supermarket. Michael T. Klare. University of Texas Press, Austin, 1985. xiv, 312 pp., illus. \$24.50; paper, \$10.95.

An American Contribution to Neuroscience. The Brain Research Institute, UCLA, 1959–1984. John D. French, Donald B. Lindsley, and H. W. Magoun. University of California, Los Angeles, Brain Research Institute, Los Angeles, 1984. viii, 325 pp., illus. Paper, \$37.50.

The Analysis of Prehistoric Diets. Robert I. Gilbert, Jr., and James H. Mielke. Eds. Academic Press, Orlando, Fla., 1985. xiv, 440 pp., illus. \$65.

Applications of Field Theory to Statistical Mechanics. L. Garrido, Ed. Springer-Verlag, New York, 1985. viii, 352 pp. Paper, \$23.70. Lecture Notes in Physics, vol. 216. From a conference, Sitges, Barcelona, Spain, June 1984.

Applications of Genetic Engineering to Crop Improvement. Glenn B. Collins and Joseph G. Petolino, Eds. Nijhoff/Junk, Dordrecht, Netherlands, 1984 (U.S. distributor, Kluwer, Hingham, Mass.). viii, 604 pp. \$75. Advances in Agricultural Biotechnology.

Applied Industrial Catalysis. Vol. 3. Bruce E. Leach, Ed. Academic Press, Orlando, Fla., 1984. xii, 397 pp., illus. \$69.50.

Applied Therapeutic Drug Monitoring. Vol. 2, Review and Case Studies. Thomas P. Moyer and Roger L. Boeckx, Eds. American Association for Clinical Chemistry, Washington, D.C., 1984. xii, 387 pp., illus. Paper, \$22.

Vasodilator Mechanisms. P. M. Vanhoutte and S. F. Vatner, Eds. Karger, Basel, 1984. viii, 283 pp., illus. \$82.75. Bibliotheca Cardiologica, No. 38. From a symposium, Sydney, Aug. 1983.

Vibrations and Waves in Physics. Iain G. Main. 2nd ed. Cambridge University Press, New York, 1984. xvi, 356 pp., illus. \$69.50; paper, \$19.95.

Vitamins and Hormones. Advances in Research and Applications. Vol. 41. G. D. Aurbach and Donald B. McCormick, Eds. Academic Press, Orlando, Fla., 1984. xxx, 292 pp., illus. \$45.

Volcanic Hazards. A Sourcebook on the Effects of Eruptions. R. J. Blong. Academic Press, Orlando, Fla., 1984. xvi, 424 pp., illus. \$66.

Warning and Response to the Mount St. Helens Eruption. Thomas F. Saarinen and James L. Sell. State University of New York Press, Albany, N.Y., 1985. xii, 240 pp., illus. \$36.50; paper, \$12.95. SUNY Series in Environmental Public Policy.

Who's Who in Technology Today. Barbara A. Tinucci and Louann Chaudier, Eds. 4th ed. Research Publications, Woodbridge, Conn., 1984. Five volumes. \$425.

Winter Ecology of Small Mammals. Joseph F. Merritt, Ed. Carnegie Museum of Natural History, Pittsburgh, 1984. x, 380 pp., illus. \$45. Special Publication of Carnegie Museum of Natural History No. 10. From a colloquium, Rector, Pa., Oct. 1981.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

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28 June issue (mailed 21 June): **7 June**
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1515 Massachusetts Avenue, NW
Washington, D.C. 20005

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Computer Scientist. Ph.D. Michigan, 1981, seeks academic/research position in use of mathematical models and software to study and analyze complex biological systems, for example, endocrine systems. Publications; industrial experience; excellent references. Box 106, SCIENCE. X

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. 5/31; 6/7

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. 5/31; 6/7

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. 5/31; 6/7, 14, 21

POSITIONS WANTED

Immunologist. Ph.D. 1980. Five years of postdoctoral experience with extensive experience in many aspects of cellular immunology, including lymphokine production and analysis, monoclonal antibody production, and biochemical signaling in lymphocyte activation. Seeks challenging academic or industrial research position with advancement potential. Available fall 1985. Will relocate. 1782 35th Avenue, San Francisco, Calif. 94122. 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. 5/31; 6/7

Medicinal/Peptide Chemist—Ph.D.—Group leader with extensive experience in the pharmaceutical industry in the design and synthesis of biologically active peptides. Strong background in solution and solid-phase technology, purification techniques, analytical development, and production scale-up. Numerous patents and publications. Box 105, SCIENCE. X

Molecular Electronics. Innovative scientist wishes to form or join strong group in molecular electronics and chemical sensors in academic, industrial, entrepreneurial, or international setting. Box 120, SCIENCE. X

Experienced Ph.D., **Pharmacologist/Physiologist**, undergraduate pharmacy degree. Seeks academic/administrative position emphasizing quality education and research for fun, not funds. Administrative experience. Box 125, SCIENCE. X

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. 5/31; 6/7, 14

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OLD DOMINION UNIVERSITY

ANALYTICAL CHEMISTRY. Tenure-track assistant professor position available August 1985. Applicants must have a Ph.D. in analytical chemistry or in an area with a strong background in analytical chemistry such as marine, environmental, or bioanalytical chemistry. Strong commitment to fundable research is expected. Successful candidate must be capable of teaching both undergraduate and graduate analytical courses as well as specialty graduate courses in his/her area. Submit curriculum vitae, description of proposed research, graduate transcripts, 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.*

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An advanced technologies company is looking for a very special person to work directly with its president and founder. The candidate should have an in-depth knowledge of chemistry, be of exceptional intelligence, and be driven by scientific curiosity. The person whom we seek must have the maturity to work well with an extremely gifted and talented scientist.

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Résumés are to be sent to: **R. D. Jacquin, Vice President, 470 Main Road, Towaco, New Jersey 07082.**

HLA LABORATORY DIRECTOR: Ph.D. immunologist with previous experience and research interest in human histocompatibility testing needed to develop the histocompatibility laboratory at The University of Texas Health Science Center at San Antonio. Please send inquiries or curriculum vitae, current laboratory procedure manual, and UCLA and/or SEOPF quality control data for the past year to: **Calian T. Lum, M.D., Director, Organ Transplantation Programs, Department of Surgery, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.**

POSITIONS OPEN

ANATOMIST MICROBIOLOGIST

The American University of the Caribbean, School of Medicine located in Montserrat, West Indies, seeks an anatomist and a microbiologist to provide instruction to first and second year medical students. Excellent salary and benefits. Send résumés to: **Selection Committee, Medical Education Information Office(s), 100 N.W. 37th Avenue, Miami, Fla. 33125.**

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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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Tenure-track **ASSISTANT PROFESSOR POSITIONS** are available in the Department of Pharmacology, University of Iowa, College of Medicine. Applications are invited from well-trained individuals who possess the Ph.D. and/or M.D. degree and who are active in an area suitable for development of a vigorous research program related to molecular and cellular pharmacology or more traditional pharmacological disciplines. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.* Submit curriculum vitae and names of three references to:

Search Committee
Department of Pharmacology
Bowen Science Building
University of Iowa
Iowa City, Iowa 52242

ASSISTANT PROFESSOR. The Department of Biochemistry is seeking a person with significant experience in the areas of bacterial chemotaxis and neurochemistry of mammals. Strong training in chemistry, biochemistry, and microbiology are preferred. Ph.D. in molecular biology is required; postdoctoral experience for more than 3 years preferred. A candidate will be expected to conduct a research program in sensory transduction of oxygen in bacteria and carotid body and to assume normal academic responsibilities. *Only U.S. citizens may apply.* Applicants for the position should provide curriculum vitae, a short description of their research plan, and names of three references by 14 June 1985. Send applications to: **Dr. Charles Slattery, Department of Biochemistry, School of Medicine, Loma Linda University, Loma Linda, Calif. 92350.**

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.*

POSITIONS OPEN

ASSISTANT PROFESSOR, MOLECULAR BIOLOGY. To complement instruction in cellular and molecular biology, develop a viable research program, and direct graduate students. Ph.D. required, post-doctoral experience preferred. The specialty of the candidate must complement existing areas in neurobiology, virology (plants and animals), radiation biology, and developmental biology. The appointment will be effective 1 September 1985 or 15 January 1986. Mail transcripts, three letters of recommendation, and curriculum vitae to: **Dr. F. Schwalm, Biology Department, Texas Woman's University, P.O. Box 23971, Denton, Texas 76204.** Applications must be postmarked no later than 7 July 1985. *Texas Woman's University is a state-supported University and an Equal Opportunity Employer.*

CHAIRPERSON, Department of Pathology. Applications are invited for the position of professor and chairperson, Department of Pathology, Medical College of Pennsylvania. Candidate should have an M.D. or Ph.D. and a commitment to excellence in medical education and to the development of significant research programs. Administrative experience is desired. Applications, including curriculum vitae, should be sent to: **Andre D. Lascari, M.D., Chairman, Pathology Search Committee, Department of Pediatrics, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129.** *Equal Opportunity Employer, M/F.*

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.**

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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.

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BIOCHEMICAL GENETICIST

Applications are invited for a biochemical geneticist, a joint position with the Faculty of Medicine, The University of Calgary, and the Alberta Children's Hospital, in conjunction with the Alberta Hereditary Diseases Program. Preferred qualifications include an M.D. and/or Ph.D., as well as clinical training and experience. Non-M.D. candidates may also be considered. The job will involve assisting the Director of Biochemical Genetics Laboratory with the investigation and management of inborn errors of metabolism and assisting in appropriate clinics and laboratory duties in connection with those patients. Research facilities will be available and the candidate will be expected to participate in the Faculty of Medicine's undergraduate and postgraduate programs. The appointment and salary level will be in the assistant or associate professor level, but a more senior candidate would be considered for full professorship. The starting date is 1 October 1985 and the closing date for applications is 30 June 1985.

All qualified individuals are encouraged to apply, but preference will be given to Canadian citizens and permanent residents. Applicants should submit a curriculum vitae to:

Dr. R. B. Lowry
Alberta Children's Hospital Research Centre
1820 Richmond Road S.W.
Calgary, Alberta Canada T2T 5C7
Telephone: 403-229-7373

ELECTRON MICROSCOPIST IN MOLECULAR BIOLOGY to perform research on molecular architecture of the nucleolus of *Physarum polycephalum*. Work will involve production of monoclonal antibodies and their use to visualize locations of structural proteins in the nucleolus. Requires Ph.D. in biological sciences and expertise in immunoelectron microscopy, including gold labelling techniques. 40 hours per week, \$18,000 per year. Apply to: **The Texas Employment Commission, Dallas, Texas,** or send résumé to: **The Texas Employment Commission, TEC Building, Austin, Texas 78778, Job Order Number 3943773.** *Ad paid by an Equal Opportunity Employer.*

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CYTOGENETICIST (M.D. or Ph.D.)

Applications are invited for a Cytogeneticist, a joint position with the Faculty of Medicine, The University of Calgary, and the Alberta Children's Hospital (Alberta Hereditary Diseases Program). Previous experience at running a hospital laboratory, as well as the ability to do research, is required. Certification by the Canadian College of Medical Geneticists is preferred. The job will include supervision of an active service laboratory, as well as participation in the genetics research program of the Alberta Children's Hospital, and in the teaching program of the Faculty of Medicine. A research laboratory is available.

The rank and salary level will be in the associate professor range, however, a more senior applicant could be considered for a full professorship. The starting date is 1 October 1985 and the closing date for applications is 30 June 1985.

All qualified individuals are encouraged to apply, but preference will be given to Canadian citizens and permanent residents. Applicants should submit curriculum vitae to:

Dr. R. B. Lowry
Alberta Children's Hospital Research Centre
1820 Richmond Road S.W.
Calgary, Alberta Canada T2T 5C7
Telephone: 403-229-7373

DEVELOPMENTAL BIOLOGIST. Applications are invited for a senior or junior tenure-track faculty position. Applicants should have at least 2 years of postdoctoral experience and maintain a research program in early development or morphogenesis, using genetic, recombinant DNA, biochemical, immunological, and/or cell biological tools to explore mechanisms of pattern specification and determination in a vertebrate or invertebrate system. The position includes supervision of graduate students and teaching in a related area. Send curriculum vitae, research summary, and three letters of reference to: **Dr. Rosemary Bachvarova, Developmental Search Committee, Department of Cell Biology and Anatomy, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021.** *An Equal Opportunity/Affirmative Action Employer.*

NATIONAL OPTICAL ASTRONOMY OBSERVATORIES,

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POSITIONS OPEN

The Department of Pathology at The Wayne State University School of Medicine is seeking a **CLINICAL PATHOLOGIST** at the level of Assistant Professor to serve as Director of a hospital-based division of Laboratory Medicine. The successful candidate will be responsible for coordinating the diagnostic, teaching, and research activities of the various sections of Laboratory Medicine. Candidates should be board-certified or eligible in clinical pathology, have on-line experience in applying quantitative techniques to laboratory medicine, and be a documented scholar in the installation and use of laboratory information systems. Training in chemical pathology is a prerequisite. Interested candidates should send their curriculum vitae and three references to: **Joseph Wiener, M.D., Chairman, Department of Pathology, Wayne State University School of Medicine, 540 East Canfield, Detroit, Michigan 48201.**

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SMITHSONIAN INSTITUTION NATIONAL MUSEUM OF NATURAL HISTORY

The Department of Paleobiology seeks two curators with research specialties in invertebrates (paleozoic); echinoderms; mollusks; or protists. Candidates should show evidence of a strong and innovative program of independent research that uses data obtained from fossils to approach questions of broad paleobiological significance. Other duties include collections oversight, exhibits, and education activities. The positions will be filled at the GS 11, 12, or 13 levels (\$26,380 to \$37,600 per annum), depending on the qualifications of the candidates. Only U.S. citizens can be considered. Minority and woman candidates are encouraged to apply. Applications must include curriculum vitae, research plans, publications, letters of recommendation, and a SF 171 (personnel qualifications statement) and must be received by 30 June 1985 at: **Employment Office, 900 Jefferson Drive, S.W., Room 1410, Washington, D.C. 20560; Attention: MPA-85-210-F.**

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.*

FACULTY POSITION—ENVIRONMENTAL TOXICOLOGY. The Department of Environmental Health Sciences of the School of Public Health, University of Alabama at Birmingham (UAB) is seeking an assistant or associate professor in environmental toxicology. This is a tenure-track position with responsibilities that include teaching of graduate level toxicology courses and initiation of independent and collaborative research. A doctorate in toxicology and an interest in carcinogenesis neurotoxicology, or inhalation toxicology, will be shown preference. Salary is negotiable, depending on qualifications. Curriculum vitae and names of three references should be sent before 30 June 1985 to: **Dr. Robert G. Meeks, Chairman, Search Committee, Department of Environmental Health Sciences, School of Public Health, University of Alabama at Birmingham, University Station, Birmingham, Alabama 35294.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CROP PHYSIOLOGIST POSITION

The Department of Agronomy and Range Science invites applications for an assistant or associate professor/assistant or associate agronomist position at the University of California Agricultural Experiment Station, Davis, California. Research interests should focus on whole plant physiology processes that relate to agronomic crop performance in California. The candidate will be expected to develop an active research program which complements existing multidisciplinary efforts. Teaching duties will include a graduate course in crop physiology/ecology and participation in graduate seminars on a rotating basis. Advising duties will be in an appropriate discipline. A Ph.D. in plant physiology or related field is required. The level of appointment will be commensurate with the candidate's experience. Recent graduates are especially encouraged to apply. Send a statement of research interests, curriculum vitae, transcripts, and the names and addresses of three references by 15 August 1985 to:

R. L. Travis

**Search Committee Chairman
Department of Agronomy and Range Science
University of California
Davis, Calif. 95616**

Telephone: 916-752-6187 or 916-752-1703

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

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.**

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.*

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY University of Arizona

The Department invites applications for a position in **MACROEVOLUTION.** Salary and rank to be negotiated. Candidates with research programs involving genetic, ecological, and evolutionary processes above the species level are encouraged to apply. Applicants should mail curriculum vitae, statement of research plans, reprints or preprints, and the names and addresses of at least three referees to: **Conrad A. Istock, Head, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona 85721.** Deadline for application is 1 September 1985. *The University of Arizona is an Equal Opportunity/Affirmative Action Employer.*

The Institute for Human Genetics, University of Minnesota invites application for **FOUR POSTDOCTORAL POSITIONS** in the laboratories of Institute staff. Research interests of the staff include: hormonal regulation of gene expression, human, biochemical and molecular genetics, tumor virology, human behavioral genetics, oncogene expression, and eukaryotic genomic structure. Please send curriculum vitae, summary of research experience, and three letters of recommendation to: **H. Towle, Institute for Human Genetics, 420 Delaware Street, S.E., Minneapolis, Minnesota 55455.** Last date for receipt of application 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.*

POSITIONS OPEN

FACULTY POSITION ANNOUNCEMENT

One or two positions. Assistant/associate professor, tenure-track, academic year, starting 1 September 1985. Teach courses in clinical dietetics, nutrition science, and area of expertise. Desired research strengths in micronutrients, diabetes, or metabolism. Earned doctorate in nutrition or related area required. R.D., membership in professional societies (AIN, ASCN), publications desirable. Salary commensurate with training and experience. Submit letter of application, including statement of teaching philosophy, research objectives, and names of three confidential references by 15 June 1985 to: **Dr. Orin Tulp, Search Chairman, Department of Nutrition and Food Sciences, 606 Nesbitt Hall, Drexel University, 32nd and Chestnut Street, Philadelphia, Pa. 19104.**

Drexel University, an Affirmative Action/Equal Opportunity Employer, especially welcomes applications from women and minority applicants.

FOREST NUTRIENT CYCLING. Postdoctoral position to work on integrated research project on nutrient cycling in forest ecosystems of Adirondacks. Experience in field research and elemental analysis required. Salary: \$19,000 per year. Send résumé and three letters of recommendation by 1 July 1985 to: **Dr. M. J. Mitchell, State University of New York, College of Environmental Science and Forestry, Syracuse, N.Y. 13210.** *An Equal Opportunity/Affirmative Action Employer.*

GENETICIST—MICROBIOLOGIST to teach genetics, microbiology, and general biology. Tenure-track position with initial 1-year appointment beginning fall semester 1985. Ph.D., entry level position. Résumé and transcripts must be received prior to 17 June: **Professor Richard Lane, Biology Department, Dickinson College, Carlisle, Pa. 17013.** Three letters of reference should also be sent as soon as possible. *An Affirmative Action/Equal Opportunity Employer.*

INSTRUCTOR—1985-1986. Academic year appointment to teach general microbiology and one semester of microbial ecology. Relevant Ph.D. and strong teaching orientation required. Send résumé to: **R. Weiner, Chairman Search Committee, Department of Microbiology, University of Maryland, College Park, Md. 20742.** *An Equal Opportunity Employer.*

MEMBRANE TRANSPORT

Postdoctoral and advanced research assistant positions are available immediately for individuals interested in pursuing studies on the structure and mechanism of ion-translocating ATPases. The ATPase in the plasma membrane of *Neurospora* is an electrogenic proton pump that operates via a phosphoryl-enzyme intermediate identical to those of the animal cell transport ATPases. Research will involve investigation of the biochemistry and molecular biology of this ATPase with the goal of elucidating its molecular mechanism. Salaries are commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514.**

Equal Opportunity Employer

The Department of Biology and the Rosenstiel Research Center of Brandeis University invite applications from **MOLECULAR IMMUNOLOGISTS** for a faculty position at the associate or full professor level. Applicants must have a strong record of independent research contributions in immunology that includes work in molecular genetics. Excellence in teaching is also expected. Send curriculum vitae, a short description of accomplished and planned research, and names of three references to: **Dr. Alfred Nisonoff, Rosenstiel Center, Brandeis University, Waltham, Mass. 02254.** Deadline for application is 1 August 1985. *Brandeis University is an Equal Opportunity/Affirmative Action Employer.*

POPULATION/BEHAVIORAL GENETICS—Postdoctoral position. Immediate opening in NSF funded project to investigate the relationship between allelic variation at a carboxylesterase locus in *Drosophila* and reproductive behavior. Experience with *Drosophila* and some biochemical background are desirable. Send curriculum vitae and the names of four references to: **Dr. Rollin C. Richmond, Department of Biology, Indiana University, Bloomington, Ind. 47405.** *An Affirmative Action/Equal Opportunity Employer.*

SABBATICAL LEAVE IN SPANISH LABORATORIES

In order to promote the interaction between the Spanish Scientific Community and Scientists working outside Spain, the CAICYT (Spanish Advisory Committee for Research and Development) invites applications from researchers willing to spend their Sabbatical leave in Spanish Laboratories. The maximum length of stay is one year and the minimum three months. The Programme will be in operation from October 1985 to July 1987. The visiting scientists will receive a salary that will be awarded on the basis of qualifications and of the percentage of their current salary that is maintained by their home institution. The following fields will have priority:

- Aquaculture (Fish Pathology, Genetics and Nutrition).
- Microelectronics (Computer Assisted Design).
- Biotechnology (Plant Breeding and Industrial Biochemical Processes).
- Biological and Pharmaceutical Chemistry.
- Materials Science (Ceramics, Polymers and New Alloys).
- Pollution Biology.
- Applied and Basic Virology.
- Production of Vegetal Protein.
- Soil and Water Conservation.
- Fine Chemistry.
- Robotics.
- Food Technology.
- Social Implications of New Technologies.
- History of Latin America.

Applicants are requested to contact the Spanish laboratory in which they intend to stay. The CAICYT will also help, on request, to establish a connection between scientists eventually interested in the Programme and those Spanish laboratories working in their area of interest. These contacts should result in a joint proposal that must be submitted to CAICYT before December 31, 1985.

Full details of the data that will be required are available either from the Spanish institutions or from CAICYT. The selected candidates will be notified no later than July 1st, 1986.

All information concerning this advertisement should be requested from M. Pacios, CAICYT, Calle Rosario Pino 14-16. 28020 MADRID. Spain. Tel. (34) - 1 - 4501063.

BIOGEN

is a biotechnology company with laboratories in Switzerland and the United States, developing commercial application of molecular biology in the areas of agriculture, chemicals, pharmaceuticals and energy.

In Geneva vacancies now exist for additional

PROTEIN CHEMISTS

for work involving the purification and characterization of proteins from recombinant microorganisms. Experience with HPLC would be an advantage.

The successful candidates will possess a PhD degree with at least two years of postdoctoral experience and an appropriate record of research productivity as documented by publications.

We offer a challenging scientific career with the opportunity to interact with talented colleagues in a stimulating environment.

Please send your résumé accompanied by the names and addresses of at least three references whom we may contact on your behalf to

BIOGEN S.A.
Personnel Manager
46, Route des Acacias
1227 Carouge - Geneva
Switzerland



RESEARCH ASSOCIATES MOLECULAR BIOLOGY

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

With reference to the recently announced USDA Research Associate Program (*Science*, 3 May 1985), the Plum Island Animal Disease Center, United States Department of Agriculture, Agricultural Research Service, is offering two RESEARCH ASSOCIATE positions in Molecular Biology.

One position involves characterization of picornaviral receptors on cultured cells using chemical cross-linking, monoclonal antibodies to cell surface proteins and antidiotype antibodies. Expertise in eukaryotic membrane biochemistry with a background in receptor-ligand interactions is required. Virology training is desirable, but not essential.

The second position involves research on use of molecular hybridization probes for the detection of picornaviral RNA in cultured cells and tissue sections. Methods using radiolabeled or affinity labeled viral RNA, cloned cDNA or synthetic oligonucleotides as hybridization probes will be compared to conventional tissue culture or serological tests to detect the viral genome or its products. Expertise in molecular cloning and hybridization analysis is required. A background in virology and immunology technique is desirable.

Both positions are to be appointed for two years and are funded at \$26,381 (GS-11) or \$31,619 (GS-12) depending on qualifications. **Successful candidates must have received a relevant PhD within the past two years and must be a U.S. citizen.** Interested individuals should send a CV and include names and addresses of three references to Dr. Baxt (Position 1) or Dr. Moore (Position 2) USDA-ARS, Plum Island Animal Disease Center, P.O. Box 848, Greenport, NY 11944. Applications should be marked "E01". For information call (516) 323-2500.

Deadline for submissions: June 28, 1985

USDA IS AN AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER
WOMEN AND MINORITIES ARE URGED TO APPLY

POSITIONS OPEN

UNIVERSITY OF QUEENSLAND LECTURER IN MEDICAL STATISTICS (TENURABLE) SOCIAL AND PREVENTIVE MEDICINE

Degree in mathematics or statistics with experience in medical data desirable. Higher degree or progress toward also an advantage. Provide instruction in statistics to medical students and consultant service to senior students/medical researchers. Participate in epidemiological research projects. Statistical programming for minicomputer and University's main-frame computers also important.

Salary per annum: A\$26,236 to A\$34,467.
Closing date: 21 June 1985.

Additional information and application forms are available from: **The Staff Officer, University of Queensland, St. Lucia, 4067, Australia.** Please quote reference number 17285.

The University of Queensland is an Equal Opportunity Employer

MANAGER OF BIOPOLYMERS LABORATORY HOWARD HUGHES MEDICAL INSTITUTE BIOSCIENCES RESEARCH BUILDING HARVARD MEDICAL SCHOOL

The Institute is seeking a scientist who will be responsible for the supervision of a modern biopolymers laboratory, including all major equipment and technical staff. Consults with faculty and staff regarding solutions to specific problems relating to current research programs that focus on cellular and molecular biology. Should be familiar with nucleotide and peptide synthesizers, the gas-phase-protein sequencer and related procedures, and FACS techniques (some training can be provided). The successful candidate will also be expected to implement additional new techniques as they become available. Minimum requirements: Ph.D. in chemistry or related basic science. Experience in peptide chemistry and familiarity with the required equipment and techniques preferred. Since this position will serve as a prime contact with researchers, it is important that there is a recognition of the special research needs of the academic environment, and a willingness to act as an innovative problem solver.

Direct applications, including curriculum vitae, and three references to:

Mr. Nelson Pleau
Howard Hughes Medical Institute
221 Longwood Avenue, Room 230
Boston, Ma. 02115

MARINE ECOLOGIST/BEHAVIORIST

Lehigh University is seeking a recent Ph.D. to manage day-to-day operations of a small wetlands-marine research station in southern New Jersey. Initial employment for 2 years, with 1 year extension possible. Responsibilities: assist research and teaching programs of Lehigh faculty (50 percent) and establish vigorous research program (50 percent). Start 1 August 1985. Send curriculum vitae (including a statement of research interests), reprints, and names of three references to: **M. Itzkowitz, Biology Department, Lehigh University, Bethlehem, Pa. 18015.** Deadline: 21 June 1985. *Lehigh is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITIONS AVAILABLE in cDNA and genomic cloning, DNA sequencing, recombinant DNA technology, mutagenesis studies, and DNA protein interactions applied to regulation of gene transcription and mRNA translation in the exocrine pancreas. Candidates should have Ph.D. degree and experience in genetic engineering and protein and nucleic acid biochemistry. Applications including curriculum vitae, bibliography, one letter of reference, and names of two additional references should be sent to: **Dr. George Scheele, Laboratory of Cell and Molecular Biology, The Rockefeller University, New York, N.Y. 10021.**

POSTDOCTORAL IMMUNOTOXICOLOGY position to study cellular mechanisms of PCB toxicity. Send résumé, letter on research experience/interests, and names of three references to: **Dr. N.E. Hutton, Veterinary Medicine, Oregon State University (OSU), Corvallis, Ore. 97331,** before 15 June 1985. *OSU is an Equal Opportunity/Affirmative Action Employer that complies with Section 504 of the Rehabilitation Act of 1973.*

POSITIONS OPEN

NEUROANESTHESIOLOGIST

Immediate need for M.D. fully trained in neuroanesthesia. Applicants must be conversant in neuroanesthesia research and have experience in anesthesia for hepatic transplantation. Board-certified or eligible. Duties include patient care; clinical teaching of residents, student nurse anesthetists, and medical students; and research. Salary dependent upon qualifications. Deadline for applications, 30 June. *Affirmative Action/Equal Opportunity Employer.* Send credentials to: **Peter Winter, M.D., University Health Center of Pittsburgh, 1385 Scaife Hall, Pittsburgh, Pa. 15261.**

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.*

POSTDOCTORALS IN PLANT MOLECULAR BIOLOGY

Postdoctoral positions are available in several plant molecular biology programs at Texas A&M University. Specific areas of interest include analysis of genes encoding sunflower seed storage proteins, role of gene expression in plant differentiation and development, and molecular systematics of maize and other crop plants. State of the art cDNA and genomic cloning techniques and DNA sequencing facilities are available within the biology department. Also on campus are protein microsequencer and oligonucleotide synthesis facilities. Starting date for all positions is 1 September 1985; salaries are in excess of \$20,000 per year with initial appointment for 2 years. To apply send curriculum vitae to:

Dr. Terry L. Thomas
Biology Department
Texas A&M University
College Station, Texas 77843

Texas A&M University is an Equal Opportunity Employer

POSTDOCTORAL/ASSISTANT PROFESSOR position available immediately in the Surgical Immunology Laboratory, V.A. Medical Center, Miami, Florida, affiliated with the Departments of Surgery and Urology at the University of Miami, School of Medicine. The research revolves around new applications of multiparameter flow cytometry in the characterization of solid tumor cell kinetics, antigens, and metabolic states. The candidate should be familiar with the principles of flow cytometry and monoclonal antibody staining/production techniques. Some computer programming experience is desirable. Send curriculum vitae to: **Norman L. Block, M.D., Department of Urology, University of Miami, School of Medicine, P.O. Box 016217, Miami, Fla. 33101; telephone: 305-547-6630.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS. Two postdoctoral positions are available for: (i) study of the mechanism of fetal hemoglobin acetylation in BFUE culture and cell-free translational systems, and (ii) study of the intracellular hemoglobin polymerization and dense cell formation in sickle hemoglobinopathies. Send résumé and three references to: **Dr. E. C. Abraham, Department of Cell and Molecular Biology, Medical College of Georgia, Augusta, Ga. 30912.** *Equal Opportunity Employer/Affirmative Action Program.* J2852.

POSTDOCTORAL POSITION(S) in enzymology and regulation of steroid hormone biosynthesis. One or two positions available now. Experience in one or more of the following areas required: membrane enzyme purification, protein chemistry, synthetic organic chemistry, and physical techniques. Salary is dependent on experience. Send curriculum vitae and two letters of recommendation to: **Dr. J. David Lambeth, Department of Biochemistry, Emory University Medical School, Atlanta, Ga. 30322.** *Emory University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL FELLOW IN BIOCHEMISTRY

Postdoctoral position available immediately to study the expression of oncogenes in premalignant and malignant tissue. Experiments employ recombinant DNA technology and immunological staining of fixed tissue. Experience in these areas highly desirable. Position will be offered for a 1- to 2-year period. Starting salary: \$18,000 to \$20,000, depending on experience. Submit curriculum vitae and three letters of recommendation to: **Dr. Kevin L. Dreher, Department of Biochemistry, School of Medicine, West Virginia University, Morgantown, W. Va. 26506.** Application closing date: 30 July 1985. *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

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 POSITIONS available 1 July 1985. One position will involve studies on the molecular basis of the genetic deficiency of pyrimidine pathway enzymes and possible associated immunodeficiency in hereditary orotic aciduria; the other position will focus on the mechanisms of DNA amplification associated with cellular resistance to chemotherapeutic agents. Both projects require the use of molecular biology techniques. Experience in genomic library construction, DNA sequencing, and expression vectors will be advantageous but not required. Starting salary of \$20,000 per year. Send curriculum vitae, a summary of research experience and future interests, and names, addresses, and telephone numbers of three references to: **Dr. D. Parker Suttle, Division of Biochemical and Clinical Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, P.O. Box 318, Memphis, Tenn. 38101.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available during 1985/1986 in the **Developmental Biology Center, University of California, Irvine, California 92717.** Recent Ph.D. required, preferably in cell, molecular, or developmental biology, neurobiology, or genetics. Positions are for research with Dr. Scott Fraser (patterning of neural development; cell communication through gap junctions); Dr. Susan Bryant (limb development and regeneration in amphibians and mammals); Dr. Hans Bode (stem cell differentiation, pattern formation); or Dr. J. Lawrence Marsh (molecular genetics of *Drosophila*). U.S. citizenship or permanent residency status required. For more information, contact the individuals above. To apply, submit résumé and description of research interests and experience, and have three letters of recommendation sent to: **The Director, Developmental Biology Center (address above).** Deadline for applications: 1 August 1985. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

PROFESSOR AND HEAD Biological Sciences Carnegie-Mellon University

The Department of Biological Sciences invites applications from highly qualified individuals to serve as professor and chairperson. We seek an individual with an established reputation in any field of biological research, and an ability to provide leadership in the continuing growth of this department. We expect to appoint the successful candidate by 30 June 1986 or before. Applications or inquiries should be sent to:

Professor W. R. McClure
Chairman, Search Committee
Carnegie-Mellon University
4400 Fifth Avenue
Pittsburgh, Pa. 15213

Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION

The Psychology Department of the Massachusetts Institute of Technology announces the opening of a faculty tenure-track position in neuroscience. Applicants with a PhD or equivalent degree are sought with training and research background in mammalian brain-morphology and function.

Interested applicants should send a letter of inquiry with curriculum vitae and three references by July 31, 1985, to:

**Dr. Peter H. Schiller
Psychology Department
Search Committee
Massachusetts Institute of
Technology, E25-634
77 Massachusetts Ave.
Cambridge, MA 02139.**

**MIT is an affirmative
action/equal
opportunity
employer. Qualified
minorities and women
are encouraged
to apply.**

MIT

MOLECULAR BIOLOGIST

The Danish Cancer Society is opening a position as research professor to build up a molecular biology research unit at the Fibiger Institute, Ndr. Frihavsgade 70, Copenhagen, Denmark.

The institute is a multidisciplinary research institute involved in several areas of cancer research including tumor endocrinology, environmental carcinogenesis and tumor virology. The director of the Fibiger Institute is dr. Jørgen Kieler. It has a total staff of 50 employed including 5 senior investigators. It is sponsored by a core grant from the cancer society and project grants from the scientific grant committee of the Cancer Society. An international scientific committee acts as an advisory body for the institute.

The successful candidate will be responsible for establishing a research programme in molecular oncogenesis and should advise the other research units on aspects of molecular biology and its application.

The successful candidate should have extensive knowledge of recombinant DNA techniques and their application to cancer research problems. The candidate should be internationally recognised in the area of cancer research, and should have a proven record of scientific accomplishments.

The appointment is for a 5-year period. A tenure position may become vacant during the initial period.

Research facilities, research funds and staff requirements are negotiable with the Executive Committee of the Cancer Society. Salary is negotiable depending on scientific qualifications and accomplishments of the candidate.

The application should be received by the chairman of the Danish Cancer Society: Professor, dr. med. Steen Olsen, Sølundsvej 1, DK-2100 Copenhagen Ø., Denmark, before 1 July 1985.

Application should include:

Curriculum vitae and bibliography

Names of 3-4 referees

A short summary of past and current research activities and a proposal for future research.

The applications will be evaluated by a committee appointed by the Scientific Grant Committee of the society after consultation with the International Scientific Advisory Committee.

Additional information is available from the director or from the chairman of the Danish Cancer Society.



UNIVERSITY OF CAPE TOWN DEPARTMENT OF ANATOMY AND HISTOLOGY AND CELL BIOLOGY UNIT

Applications are invited irrespective of sex, race or religion, for the following tenure-track posts which fall under the joint agreement between the University of Cape Town and the Cape Provincial Administration.

2 Posts in Anatomy

2 Posts in Histology and Cell Biology

Appointments will be made according to qualifications and experience, at Associate Professor, Senior Lecturer or Lecturer levels, on the following salary scales:

Associate Professor:	R28 889-R44 385
Senior Lecturer:	R26 402-R39 480
Lecturer:	R20 482-R34 070

per annum with an annual bonus and attractive staff benefits.

Applicants should be well-qualified scholars with interests in the following fields:

Anatomy: Gross Anatomy, Embryology and Neuroanatomy.

Histology and Cell Biology: Cellular and/or Developmental Biology. It is essential for applicants to have a doctoral degree in Medicine or Science, and individuals who use cellular and molecular approaches to study biomedical structure-function relationships are especially urged to apply.

Applicants should submit a full curriculum vitae, the names and addresses of at least three referees and a brief description of present and future research interests, not later than 14 June 1985 to the Registrar (Attention: Appointments Office), (Ref. AQ/536), University of Cape Town, Rondebosch, 7700, South Africa, from whom further information should be obtained.

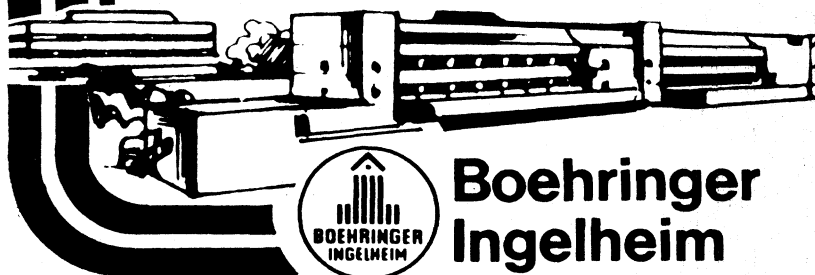
UCT is an equal opportunity employer.

Allergy Research Scientist

BOEHRINGER INGELHEIM PHARMACEUTICALS INC., a major developer, manufacturer, marketer and distributor of ethical and over-the-counter pharmaceuticals is expanding its Research and Development staff. As one of the most rapidly expanding firms in today's pharmaceutical industry, we continue our search for new answers to U.S. and world health care problems.

The candidate we seek will possess a Ph.D in pharmacology or physiology with 2-5 years post doctoral experience involving the design of in vivo models and characterization of antiallergy compounds. Responsibilities will include the supervision of laboratory personnel. Excellent communication skills (oral and written), as well as the ability to function as part of a diversified scientific team is required.

Our state-of-the-art environment is combined with a highly competitive compensation/benefits package including generous relocation assistance. Please send resume and salary history to: Dept. MAL, R&D, BOEHRINGER INGELHEIM PHARMACEUTICALS INC., 90 East Ridge, P.O. Box 368, Ridgefield, CT 06877. An equal opportunity employer m/f/h/v.



POSITIONS OPEN

POSTDOCTORAL POSITION, available after 1 October. Cell biology-physiology-biochemistry laboratory studying isolated cardiac membrane channel proteins seeks immunologist for immunofluorescence and immunoelectron microscopic investigations. Applicant should have doctorate and experience with poly- and monoclonal antibody techniques. Send curriculum vitae, description of research interests, and references to: **Dr. Ernest Page, Department of Medicine, BH Box 137, The University of Chicago, 5841 South Maryland Avenue, Chicago, Illinois 60637. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study the role of $[Ca^{2+}]_i$ in excitation-contraction coupling in smooth muscle. Project involves the use of bioluminescent and fluorescent Ca^{2+} indicators in isolated cells and strips of smooth muscle. A knowledge of mechanics would be useful. Send curriculum vitae and names of three references to: **Dr. K.G. Morgan, Cardiovascular Division, Beth Israel Hospital/Harvard Medical School, 330 Brookline Avenue, Boston, Mass. 02215.**

POSTDOCTORAL POSITION available to study interactions between plant associations, orchard management, physical factors, pest populations, and fruit production in commercial peach orchards. Applicants should be broadly trained in entomology, horticulture, weed/plant science, and integrated pest management. Submit a résumé, transcripts, a summary of current research, recent reprints, and three letters of recommendation to: **Dr. John R. Meyer, Department of Entomology, North Carolina State University (NCSU), Box 7626, Raleigh, N.C. 27695-7626.** Closing date for applications is 15 June 1985. *NCSU is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE position available immediately for studies of nuclear structures and functions. One project involves primary transcripts, heterogeneous nuclear RNA, and small nuclear RNA. The other deals with the identification and characterization of the genes of the blood group antigens. Background in biochemistry, molecular biology, and DNA recombinant technology is essential. Applicant will join in active research program in recombinant DNA technology. Job security with opportunity for advancement, competitive salary, excellent benefits. Send curriculum vitae and letters of reference to: **Dr. Oscar Pogo, Head, Department of Cell Biology, Kimball Research Institute, New York Blood Center, 310 East 67 Street, New York, N.Y. 10021. Equal Opportunity Employer.**

AUSTRALIA JAMES COOK UNIVERSITY OF NORTH QUEENSLAND PROFESSOR OF MARINE BIOLOGY

James Cook University invites applications for the position of professor of marine biology which became vacant on the retirement of Professor C. Burdon-Jones in December 1984. The appointee will also be the head of the Department of Marine Biology. The Department of Marine Biology, together with the Departments of Botany and Zoology, constitute the School of Biological Sciences. Professor D. J. Griffiths is the head of the Department of Botany and current head of the school. A new chair in zoology is presently being filled. In future, the headship of the school will be rotated among the three department heads.

The University, located adjacent to the tropical waters of the Central Great Barrier Reef, seeks to appoint a person of strong qualifications, with a proven research and academic record, who will enhance or complement the department's interests in marine ecology, physiology, and behaviour. Current fields of specialization include coral biology, crustacean behavioural physiology, and the ecology of soft benthos and meroplankton.

The salary for professor is currently A\$54,948 per annum.

Further information and application forms may be obtained from: **The Registrar, James Cook University, Townsville, Queensland 4811, Australia** with whom applications close on 12 July 1985. In reply, please quote reference number JS85048.

POSITIONS OPEN

POSTDOCTORAL POSITIONS

Available immediately for research on: (i) structure of virus proteins and their functions in gene expression, pathogenesis, and immunity (Dr. Allen Portner); or (ii) the structure, transcriptional regulation, and biological activity of new members of a human oncogene family (Dr. Allan Tereba). Applicants will have an opportunity to gain conceptual and technical experience in molecular biology, monoclonal antibody production, synthesis of peptides and sequencing of proteins, and nucleic acids. Send curriculum vitae and the names of three references to: **Dr. Allen Portner or Dr. Allan Tereba, Department of Virology and Molecular Biology, St. Jude Children's Research Hospital, P.O. Box 318, Memphis, Tennessee 38101.**

POSTDOCTORAL RESEARCH APPOINTMENTS are occasionally available in the Department of Biochemistry, Emory University School of Medicine, Atlanta, Georgia 30322. Appointments are normally made for 1 year, but with the possibility of renewals for a maximum of two more years. A description of the research interests of the faculty is available from the department upon request, and highly qualified persons are invited to apply directly to the faculty member with whom they wish to work. If no position is available with that faculty member, the application may be circulated to others in the department with similar research interests. Applications should include a résumé, a brief statement of research interests and goals, and the names and addresses of three references. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE. Research projects involve effect of ethanol on diabetes mellitus, pancreatic islet growth promoting factor, and other aspects of experimental diabetes mellitus. Preference will be given to U.S. citizens. There will be some teaching of neuroanatomy. Submit letter of interest, curriculum vitae, and the names of three references to: **Carl R. Morgan, Ph.D., Chairperson, Department of Anatomy, East Carolina University, School of Medicine, 7N-100 Brody, Greenville, N.C. 27834-4354. East Carolina University is an Affirmative Action/Equal Opportunity Employer.**

PRESIDENT—EDUCATIONAL COMMISSION FOR FOREIGN MEDICAL GRADUATES

Qualifications: knowledge of U.S. and international 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.**

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW

Immediate opening for M.S./Ph.D. with appropriate training in cytogenetics. The successful candidate will be expected to conduct sister-chromatid exchange analysis in rodent and human fibroblasts and rodent and human hepatocytes in primary culture following exposure to chemical carcinogens. Demonstrated laboratory experience with sister-chromatid exchange analysis is required. Very competitive salary and pleasant living conditions. Send curriculum vitae and relevant publications to: **Mr. Stephen Strom, Departments of Radiology and Pharmacology, Box 3455, Duke University Medical Center, Durham, N.C. 27710. Telephone: 919-684-4190. Duke University is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH BIOCHEMIST—Federal service. The Letterman Army Institute of Research, San Francisco, California, is seeking a Ph.D.-level biochemist to conduct independent research in protein biochemistry. Areas of investigation include protein structure, modification, purification, and separation; hemoglobin structure and function; and plasma fractionation and storage. Must be U.S. citizen. Salary: \$37,599 to \$48,876. Send résumé and publications list to: **C. Swift, SGRD-ULZ-RM, Letterman Army Institute of Research, Presidio of San Francisco, Calif. 94129. An Equal Opportunity Employer.**

POSITIONS OPEN

PROJECT DIRECTOR

The Southern California Coastal Water Research Project Authority (SCCWRP) is seeking a highly qualified and unique individual to serve as project director. SCCWRP is an independent joint powers agency created in 1969 to research and analyze the effects of man on the marine resources of the Southern California Bight and to relate these findings to the existing or proposed environmental control policies and requirements. The director has full responsibility under the commission for administering all activities of SCCWRP. Duties include: directing scientific and other staff; coordinating the development of research plans; preparing proposals for external funding; production of biennial reports and scientific findings; testifying at legislative and regulatory hearings; and coordinating activities of participating agencies. Requires combination of education and experience in oceanography or other scientific disciplines that provides a strong background in marine science; advanced degree highly desirable; demonstrated ability to manage a technical or scientific organization. Send curriculum vitae or résumé to: **SCCWRP Search, P.O. Box 90083, Long Beach, Calif. 90809-0083 by 15 June 1985. Telephone: Mike Deblieux, 714-963-0036 for further information.**

RESEARCH ASSISTANT PROFESSOR IN CELL BIOLOGY. Forty hours per week, \$20,000 per year salary. Employee will work on a collaborative research project in the area of cell biology, emphasizing the role of the cell cytoskeleton in the maintenance of cell shape and tissue integrity. The research will focus on the organization of intermediate filament-desmosome complexes and their involvement in skin cell cohesion. The project will, in part, involve the morphological and biochemical analysis of auto-antibodies from human patients with blistering diseases in which the cohesion of epithelial cells has been lost. The results of these studies will be relevant to skin diseases, including cancer. Graduate student supervisory duties will be involved. Qualifications: Ph.D. in biology, plus 4 years of experience as a research assistant professor in cell biology or Ph.D. in biology, plus 4 years of experience as a postdoctoral research associate or fellow. Research experience must be in area as described in job description. Send résumés to: **Illinois Job Service, 910 South Michigan Avenue, Room 333, Chicago, Illinois 60605; attention: Joan Haight, Reference Number 4496-H. An Employer Paid Ad.**

RESEARCH ASSOCIATE

Postdoctoral position available to study either nuclear targeting or proteins in injected *Xenopus* oocytes or developmental regulation of RNA binding proteins during early *Xenopus* development. Experience in molecular biology/biochemistry is required. Send curriculum vitae and names, addresses, and telephone numbers of three persons willing to act as references to: **Dr. Joel Richter, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

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

RESEARCH COORDINATOR, SENIOR—Position requires a minimum of a bachelor's degree and 7 years of experience or a master's or Ph.D. with 3 to 4 years of experience in cellular immunology to perform immunodiagnostic tests using monoclonal antibodies and mitogens. Extensive experience with lymphocyte purification, expert use of microscopes and tissue culture required. Will be trained in use of flow cytometry. Please send résumé to: **L. Tarallo, Personnel Department, The Mount Sinai Medical Center, 19 East 98 Street, New York, N.Y. 10029. An Equal Opportunity Employer.**

RESEARCH NEUROBIOLOGIST: Conduct research exploring the lipid and protein domains of olfactory cilia using electron microscopy with the aid of freeze-etching and freeze-substitution and various cytochemical probes. Animals: rats. Equipment: electron microscopy and freeze-fracture machine. Employee will supervise one laboratory technician. Minimum requirements: Ph.D. in life sciences, 4 years of experience in the job offered or 4 years as a research associate doing postdoctoral research at a major laboratory in field of neurobiology or cell biology using cryo-electron microscopy techniques. One year of experience with olfactory system. Forty-hour week, Monday through Friday, \$25,000 a year. Send résumé to: **Illinois Job Service, 910 South Michigan Avenue, Room 400, Chicago, Illinois 60605, Attention: Joan Haight, Reference number 4509-H, an employer-paid ad. Affirmative Action/Equal Opportunity Employer.**

MOLECULAR BIOLOGY RESEARCH

Continuing its commitment to a strong research organization, **The Upjohn Company**, Kalamazoo, Michigan, (a leader in worldwide research, marketing and production of pharmaceuticals, chemicals and agricultural products) is significantly expanding its existing biotechnology activities and assembling a strong core Biotechnology research and development support group. Comprised of Cell Biology, Molecular Biology, and Biopolymer Chemistry research, the Biotechnology group develops techniques and undertakes state-of-the-art basic and applied studies.

The Molecular Biology research group has an opening for a scientist to participate in existing programs and initiate new areas of research. This position requires a Ph.D. in Microbiology, Biochemistry, or related area, and postdoctoral experience in nucleic acid biochemistry with expertise in the preparation, cloning, and screening of cDNA libraries. This position is part of the growing biotechnology program which interacts with scientists throughout The Upjohn Company.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate. In addition, the position described above presents an extraordinary opportunity to design, develop and carry out a state-of-the-art research program.

For confidential consideration, please call outside Michigan toll-free 1-800-253-8600, Ext. 3-6767, or inside Michigan collect (616) 323-6767 to request an employment application be sent to you immediately. Please refer to Ad Number 17125-J1 when calling.

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Postdoctoral Position Molecular Biology Research

Continuing its commitment to a strong research organization, **The Upjohn Company** is significantly expanding its existing biotechnology activities and assembling a strong core Biotechnology research and development support group. Comprised of Cell Biology, Molecular Biology, and Biopolymer Chemistry, the Biotechnology group develops techniques and undertakes state-of-the-art basic and applied studies.

The Molecular Biology research group has a 1-2 year **postdoctoral** position available for an individual interested in developing plant gene transfer systems for crop-species. Applicants should have a Ph.D. in plant cell biology, plant molecular biology, or other related area. Experience in plant tissue culture and regeneration methods is required. A knowledge of plant molecular biology, DNA cloning and transformation systems is helpful. The successful candidate will work directly with Dr. Jerry L. Slightom and other senior scientists in Upjohn's Molecular Biology unit.

For confidential consideration, please call outside Michigan toll-free 1-800-253-8600, Ext. 3-6767, or inside Michigan collect (616) 323-6767 to request an employment application be sent to you immediately. Please refer to Ad Number 17125-J2 when calling.

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CELL BIOLOGY/MOLECULAR BIOLOGY RESEARCH

The Upjohn Company, Kalamazoo, Michigan, is significantly expanding its existing biotechnology activities and assembling a strong core Biotechnology research and development support group. Comprised of Cell Biology, Molecular Biology, and Biopolymer Chemistry research, the Biotechnology group develops techniques and undertakes state-of-the-art basic and applied studies.

Associates are being sought with research experience and a demonstrated ability to work independently. Job opportunities exist in several areas for B.S. and M.S. degreed Associates with experience in the following areas:

CELL BIOLOGY

Cellular and molecular immunology, especially in the areas of lymphokines, MHC and in vitro antibody stimulation. Backgrounds in cloning techniques, HPLC and/or monoclonal antibody generation are desirable.

MOLECULAR BIOLOGY

Isolation and purification of DNA and RNA from mammalian cells. Experience in cDNA cloning highly desirable.

Expression of cloned genes in prokaryotes with emphasis on translational regulation and protein secretion.

DNA, RNA and protein isolation and characterization, molecular cloning, DNA sequencing and in vitro RNA and protein assays.

Expertise in plant tissue culture, regeneration, protoplast isolation and recombinant DNA techniques. Knowledge of crop plant and bacterial genetic manipulations helpful.

Upjohn offers a stimulating research environment, opportunity for career growth, competitive salary and benefits, and relocation assistance. Kalamazoo, a mid-sized Michigan community, provides a rich mix of cultural, educational, and recreational pursuits. In addition, the positions described above present an extraordinary opportunity to actively participate in state-of-the-art research programs.

For confidential consideration, please call outside Michigan toll-free 1-800-253-8600, Ext. 3-6767, or inside Michigan collect (616) 323-6767 to request an employment application be sent to you immediately. Please refer to Ad Number 17382-F when calling.

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POSITIONS OPEN

RESEARCH INSTRUCTOR IN PHYSIOLOGY

Effective: as soon as possible.

Annual salary: \$24,000.

Ph.D. in physiological chemistry plus 3 years of postdoctoral training.

Training in hormone physiology, endocrinology, physiological chemistry; training in biostatistics, biometrics and computer programming, including ability to program in Basic, Pascal and Fortran; specific training in field of hormone release as related to receptor mechanisms and other release factors; specific experience in the field of regulation of protein turnover; expertise in monoaminergic and peptidergic receptors, with recent publications.

Research in neuroendocrinology, neurophysiology of hormone release, in general mechanisms of hormone release and discharge in vivo and in vitro, especially as related to membrane receptor systems and to influence of other hormones and neurotransmitters, including model peptides. This should involve treatment and preparation of animals (cannulations, organ removal, transplantation, placement of lesions, and cannulas to stereotaxic coordinates); preparation of labeled hormones and monoaminergic ligands (including iodination, purification, partial syntheses); preparation of physiological fluids and extracts, isolation of cellular elements and subcellular fractions, and also work on organ and tissue explants and dispersed cells; all types of data processing and computation, including creation of computer programs, all types of data presentation and interpretation.

Apply at: Texas Employment Commission, TEC Building, Dallas, Texas, or send résumé to the Texas Employment Commission, TEC Building, Austin, Texas 78778, Job Order Number 3941422. Ad paid by An Equal Employment Opportunity Employer.

RESEARCH POSITION for Ph.D. in biochemistry with 4 years of postdoctoral experience in the biochemistry and immunology of myelin, to carry out independent research into the molecular basis of demyelinating disorders, particularly multiple sclerosis and Guillain-Barre syndrome. Expertise is required in isolation and characterization of myelin glycoproteins, and investigation of their interaction with the immune system and with viruses. Ability to investigate these interactions in tissue culture and experimental animals, and to quantitate changes in myelin components is also required. Position will carry with it academic appointment. Salary: \$25,500 per annum. Send résumés to: Massachusetts Division of Employment Security, C. F. Hurley Building, Boston, Mass. 02114 and refer to job reference number 5542.

SENIOR SCIENTISTS. Armauer Hansen Research Institute (AHRI) in Addis Ababa, Ethiopia invites applicants to one of its three positions as senior research scientist (M.D. or Ph.D.) from 1 January 1986 for a 2-year renewable contract. AHRI is an international-research institute which is supported through Scandinavian organizations and presently has collaborators from ten different nations. It deals with experimental work, notably, recombinant DNA technology, cellular immunology and immunopathology of leprosy, and leishmaniasis. It is affiliated with ALERT (All African Leprosy and Rehabilitation Training Centre) which has a 200-bed hospital. Furnished staff house, travel expenses, and educational allowance are offered within the contract. Applications (preferably before 30 July) and further information from: Sven Britton, Director, AHRI, P.O. Box 1005, Addis Ababa, Ethiopia.

STAFF ASSOCIATE—Full-time laboratory research in the area of fluid and electrolyte transport in intestinal tissues. Ph.D. or master's level with strong background in biochemistry, pharmacology, and cell biology. Submit curriculum vitae to: Dr. Eugene Chang, Division of Gastroenterology, Columbia University, Department of Medicine, 630 West 168 Street, New York, N.Y. 10032. Equal Opportunity/Affirmative Action Employer.

THEORETICAL CHEMIST—Write research proposals in the areas of statistical mechanics and scattering theories—identify problems, formulate solutions. Develop computer programs, do computations, analyze results, and write reports. Requires: Ph.D. in theoretical chemistry, 2 years of experience. Included within the 2 years of work experience, must have knowledge and experience in computations of ab initio calculations. Monday through Friday, 9 a.m. to 5 p.m., 40 hours per week, \$29,500 per year. Please send résumé with copy of this ad to: OBES, c/o M. Johnson, J.O. Number 0262407, 3434 Cleveland Avenue, P.O. Box 24167, Columbus, Ohio 43224.

POSITIONS OPEN

VIROLOGIST—MICROBIOLOGIST

Charleston, South Carolina. Production Environment. Work includes large-scale production of viruses, bacteria, mycoplasma; purification by biophysical and biochemical methods; cryopreservation; and immunological methods. Masters degree in microbiology or appropriate science and 5 or more years of experience in use of ELISA, biochemistry, cultivation of primary, diploid and heteroploid cells, human and infra-human retroviruses, classical virological assays and above listed work required.

Send résumé, salary requirements, and names and addresses of three professional references to: Position number S6782, LITTON BIONETICS, INC., 5516 Nicholson Lane, Kensington, Maryland 20895. We are an Affirmative Action/Equal Opportunity Employer.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

Apply:

David R. Jones

Zoology Department

University of British Columbia

Vancouver, British Columbia, Canada V6T 2A9

HUMAN BIOCHEMICAL GENETICS. Postdoctoral fellowship available in 1985 to Ph.D. in biochemistry, cell biology, or biochemical genetics to participate in ongoing projects in biochemical genetics, for example, cystic fibrosis and lysosomal storage diseases. Applicants should be knowledgeable in biochemical procedures, including radioimmunoassay and tissue culture. Previous experience is desirable. Résumé and three references should be sent to: Georgianna D. Vladutiu, Ph.D., Director, Biochemical Genetics Research Laboratory, State University of New York at Buffalo, Children's Hospital, 219 Bryant Street, Buffalo, New York 14222. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP IN MAIZE GENETICS. Applications are invited for a postdoctoral fellowship available after 1 September 1985. We seek candidates to apply tissue culture technology to the study of maize transposable elements at the molecular and cellular levels. This fellowship, which is supported by DeKalb-Pfizer Genetics, offers a competitive salary and is renewable after 1 year. Qualified individuals should have experience in plant (preferably maize) tissue culture and a strong interest in plant genetics and molecular biology. Submit your curriculum vitae and names of three references to: Dr. Stephen Dellaporta, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York 11724. Equal Opportunity Employer.

College of Medicine, University of Cincinnati POSTGRADUATE FELLOWSHIPS in THE MOLECULAR AND CELLULAR BIOLOGY OF LIPIDS AND LIPOPROTEINS

Applications for 1 to 3 year appointments are invited from Ph.D. or M.D. graduates who have strong backgrounds in biochemistry, molecular genetics, cell biology, immunology, or developmental biology. Stipends begin at \$16,000 and increase significantly depending on relevant experience. Successful applicants will join a group of active and interactive faculty members; students, and postdoctoral fellows who use contemporary methods to solve fundamental problems in lipid metabolism in normal and disease states. Faculty members are Charles Glueck (risk factors and hormonal contributions in atherosclerosis); Judith Harmony (regulation of the cell cycle, lipids as signal transducers, dynamics of neutral lipids); Jim Heubi (ontogeny of the enterohepatic circulation); Richard Jackson (apolipoprotein structure and function, lipid-protein interactions, regulation of triglyceride hydrolysis); Moti Kashyap (molecular basis of hypertriglyceridemia); Harry Rudney (intracellular sterol metabolism); Ravi Subbiah (lipid metabolism and development, cholesterol metabolism in the arterial wall); Jeff Whitsett (biogenesis of lung surfactant). A current curriculum vitae, a brief statement of career goals, representative publications, and three letters of recommendation should be sent to:

Judith A. K. Harmony
Department of Anatomy and Cell Biology
University of Cincinnati
Cincinnati, Ohio 45267-0521

The deadline is 30 June 1985. Applicants should be U.S. citizens or permanent residents.

FELLOWSHIPS

MEDICAL ONCOLOGY RESEARCH FELLOWSHIP

Positions available July 1985 for a 3-year fellowship at the Fox Chase Cancer Center. The first year provides extensive clinical management and research experience. The subsequent years are devoted to laboratory research with minimal clinical duties. Laboratory opportunities are available throughout the Center, including the Institute for Cancer Research. General areas of interest include developmental and tumor biology, molecular genetics, viral and clinical carcinogenesis, basic immunology, pharmacology, and MRI spectroscopy. Individuals Board-eligible or -certified in internal medicine who are interested in an academic oncology career should contact: Robert L. Comis, M.D., Medical Director, Fox Chase Cancer Center, Philadelphia, Pa. 19111.

POSTDOCTORAL RESEARCH FELLOWSHIPS in cardiovascular pharmacology/physiology are available on or before 1 July 1985 to participate in cardiodynamic, metabolic, and/or electrophysiological studies of myocardial ischemia and circulatory shock. Send curriculum vitae and two letters of reference to: H. Richard Adams, Department of Biomedical Sciences, College of Veterinary Medicine, University of Missouri, Columbia, Mo. 65211.

TRAINING PROGRAM

M.S. IN BIOTECHNOLOGY. A new graduate program in biotechnology will start at the University of Tennessee, Knoxville in September of 1985. It will include extensive training in cell biology and recombinant DNA methodologies, as well as process engineering and plant and animal tissue culture. It will include either co-op experience with industry, or a traditional thesis in an area of specialization. A seminar on sociological, bioethical, and regulatory aspects of biotechnology is part of the program. Financial assistance is available. Apply to:

Program Director, Biotechnology
M303 Walters Life Sciences Building
The University of Tennessee
Knoxville, Tenn. 37996-0830

SYMPOSIA

AN INTERNATIONAL SYMPOSIUM ON PULMONARY EMPHYSEMA AND PROTEOLYSIS

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State-of-the-art presentations will be given on the protease-antiprotease balance in the lung, oxidant-antioxidant interactions and their influence on proteases, cigarette smoke components, tissue injury and inflammation, therapeutic approaches to emphysema, and genetic polymorphisms and deficiencies and their effect on disease. A full symposium volume will be published.

Attendance is limited. For more information and application, please write to: Charles Mittman, M.D., City of Hope Medical Center, 1500 East Duarte Road, Duarte, Calif. 91010.

An International Symposium "IS THE EARTH A LIVING ORGANISM?" 1 to 6 August 1985 at the University of Massachusetts at Amherst

The belief that the earth is a living organism has been voiced with increasing frequency in recent times. To advance our understanding of the living earth concept, its history, scientific formulations, cross-cultural interpretations, and implications for modern society from embracing the living earth belief, the National Audubon Society Expedition Institute in cooperation with Planetary Citizens, Planet Drum Foundation, and New Alchemy Institute will host a major public symposium with keynote speakers including: Lewis Thomas, George Wald, Jim Lovelock, Mary Catherine Bateson, John Todd, and Donald Michael; 50 other papers, books and art, films, and Paul Winter concert.

Registration: \$100 general, \$50 students before 15 July; after 15 July, \$125/\$75. (Special reduced rate airline fares courtesy of American Airlines.)

National Audubon Expedition Institute
Box 637
Mill Valley, California 94941
Telephone: 415-383-5064



UNIVERSITY OF CAPE TOWN

Postdoctoral Research Fellowships 1986

The University of Cape Town annually invites applications for Post-Doctoral Research Fellowships to be held at the University.

The Fellowships are tenable for a twelve month period and the monthly stipend attached to the Fellowship is R1 650. Successful candidates from abroad will receive an additional Travel grant up to a maximum of R2 200. There is no restriction to any particular field of research.

Preference will be given to recently qualified research workers but reduced awards suitable for a visit of about 3 months have sometimes been made to tenured staff members of Universities. Preference is also given to applicants whose research interests and facility needs mesh well with those of the appropriate host department.

Each application must include full details of the applicant's envisaged research programme in addition to a full curriculum vitae and the names of two referees whom the University may consult. The policy of the University is not to discriminate in the appointment of staff on the grounds of sex, religion, race, colour or national origin. The dates at which the successful candidates will be expected to take up their duties are flexible and can be arranged to suit the special circumstances of each candidate.

Applications should be addressed to the Head, Research Administration, University of Cape Town, Private Bag, Rondebosch 7700, South Africa, so as to reach him by 15 July 1985.

The initial round of award letters will be despatched at the end of September.

FSR 0860

DEAN, COLLEGE OF MEDICINE

University of California, Irvine, seeks Dean of UCI/California College of Medicine. Candidates must be eligible for appointment as professor in the University of California system. Demonstrated administrative ability, a distinguished record of scientific leadership, and strong academic credentials are required.

Applicants should send vitae and a letter expressing interest to Dennis Cunningham, Professor of Microbiology and Molecular Genetics and Chair, Dean's Search Committee: C/O Academic Affairs, 515 Administration, University of California, Irvine, Dept. S, Irvine, California 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.

Postdoctoral Scientist Cardiovascular Pharmacology

SmithKline, a leader in pharmaceutical research, is seeking a Postdoctoral Scientist to join an interdisciplinary research program in Cardiovascular Pharmacology in an environment designed to foster creative, innovative research and to promote personal and professional growth.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and a full interaction with the scientific community.

Our postdoctoral appointments are of one year duration and with mutual agreement renewable for a second year. The successful candidate will undertake an independent program in vascular pharmacology.

Candidates are required to have:

- a PhD in Pharmacology or related discipline with 0-2 years postdoctoral training.
- experience and proven research ability relevant to the vasculature.
- interest in hormonal and drug induced mechanisms of vasodilatation.
- interest or experience in endothelial tissue culture.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and names of three references to: Mr. Walter B. Flagg, SMITHKLINE BECKMAN CORPORATION, P.O. Box 7929, 1554 Spring Garden Street, Philadelphia, PA 19101.

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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

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