

cells. Not much is said about their visually mediated behavior because there is not much to say. A discussion of that topic by Burr deals with terminology more than with substance.

The arthropods have attracted much attention as models for studying visual information processing because they have sufficiently complex behavior to be interesting and because they can be studied with many techniques. But which is the best model for discovering fundamental principles? Laughlin argues that the fly is rapidly superseding *Limulus* as the best invertebrate model and supports his claim with an excellent physiological discussion of signal processing by monopolar cells of the lamina. Perception of movement by tethered flies has been studied extensively and quantitatively for many years by the group from Tübingen, five of whom contribute here. The fly retina, which is described by Franceschini, is well understood but not simple, for it contains six distinct spectral types of central receptor cells the behavioral functions of which are a mystery. Understanding of the neuroanatomy of the fly's optic neuropils has been advanced considerably by Strausfeld, who in this volume discusses columnar neurons, including giant neurons of the lobula plate. Hausen describes well the physiological properties of those giant neurons and their role in movement detection. Buchner and Buchner show how the deoxyglucose technique can be used to label movement-specific activity in the medulla and lobula. E. Buchner describes and evaluates mathematical models for detection of position and movement.

The fly is not the only candidate for "best model." I cast my vote for the social Hymenoptera. The honey bee *Apis* and the desert ant *Cataglyphis* have a much more interesting and well-characterized repertoire of visually mediated behavior than flies. Their retinas are spectrally simple compared with those of flies and are just as well understood anatomically and physiologically. Their neuroanatomy, however, is not nearly as well described as is that of flies. A problem with Ali's volume as a textbook is that discussions of the Hymenoptera are sparse and poor. Autrum's volumes cover this subject well.

Five of the chapters should delight the layperson as well as the specialist. These chapters are well illustrated and written in lively style in language that should be understandable to readers who have some background in biology. There is a chapter on protozoans by Couillard, one on rotifers by Clément and Wurdak, and

one on spiders and myriapods by Muñoz-Cuevas. The jewels of the volume are two sparkling chapters by Land, one on the optical inventiveness of crustaceans and the other on the unique eyes of molluscs.

GARY D. BERNARD

Yale University, Department of Ophthalmology and Visual Science, New Haven, Connecticut 06510

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(Continued on page 859)

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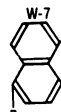
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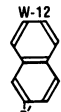
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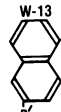
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1. Virtanen et al., J. Cell Sci 50, 45-63 (1981)

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BOOKS RECEIVED

(Continued from page 828)

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Microbiologist, Ph.D. 1985. Molecular biology experience. Desires postdoctoral position in molecular biology of human viruses or infectious disease agents. Interested in the use of recombinant DNA methodology for vaccine development. Box 196, SCIENCE. X

POSITIONS WANTED

Pharmacologist/Cell Biologist, Ph.D. 1974, Stanford. Eight years of experience in an ivy-league medical school as faculty member and principal investigator on NIH grants. Broadly trained in neurobiology, cell biology, and biochemistry. Knows cell culture, receptor biochemistry, neuronal development, and tumor promoter, steroid, and polypeptide hormone mechanisms. Published in major journals. Excellent references. Seeks interesting senior position in academia/industry/government. Box 190, SCIENCE. X

Sales/Marketing Manager. Need help marketing your biotechnology/clinical products worldwide? Telephone: 617-492-6200 or write: P.O. Box 464, Norwood, Mass. 02062. X

Technology Scout-Licensing Consultant University-Industry: Strong technical international chemical business experience; patent law, pharmaceuticals, biochemistry, microbiology, fermentation, textiles, plastics, urethane vinyl foams, coated fabrics, soaps, cosmetics, detergents. Broad experience licensing product development of industrial and consumer products. An asset for new products search. Box 197, SCIENCE. 8/24, 31

Veterinary Pathologist/Toxicologist, D.V.M., Ph.D., Diplomate: ACVP, 9 years of experience in government and pharmaceutical/chemical preclinical safety evaluations, and with regulatory agencies. Seeks position with managerial and scientific responsibility. Box 198, SCIENCE. 8/24, 31; 9/7

Virologist/Microbiologist, Ph.D. 1971. Three postdoctoral positions. Virology and cell culture research experience including vaccine strain development, virus isolation, identification, purification, structural protein characterization and adaptation of cells for large-scale cultivation. Seeking industrial/research position. Box 192, SCIENCE. 8/24, 31; 9/7

POSITIONS OPEN

ACADEMIC ADMINISTRATOR III Space Sciences Laboratory University of California

The Space Sciences Laboratory of the University of California at Berkeley has an opening for an Academic Administrator III to head the Science Operations and Data Analysis (SODA) Section of the Extreme Ultraviolet Explorer Project. The SODA section has the functional responsibility for the development of all computer hardware and software associated with the project. Specific duties include all SODA section scheduling, budgeting, technical reporting and documentation. The SODA administrator is responsible for demonstrating that the software system meets the requirements for the science payload.

Candidates must have a Ph.D. in physics or astronomy plus 5 years of experience in the design and operation of a scientific satellite software system. Experience in coordinating scientific data processing required. Supervisory experience in a university environment desirable. Knowledge of satellite attitude determination systems and sensors helpful.

Deadline for applications is 15 September 1984. Applicants should submit a résumé and three letters of recommendation to:

Dr. Stuart Bowyer
Space Sciences Laboratory
University of California
Berkeley, Calif. 94720

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

DEPARTMENT OF CHEMISTRY UNIVERSITY OF CALIFORNIA, BERKELEY

Applications are invited for a position at the level of **ASSISTANT PROFESSOR OF CHEMISTRY**, beginning fall 1985. We are interested in outstanding candidates, with exceptional promise in teaching and research in any area of chemistry. Appointments with tenure are possible as **ASSOCIATE PROFESSOR** or **FULL PROFESSOR** for persons with outstanding qualifications and sufficient experience in analytical, biological, inorganic, or organic chemistry.

Candidates should submit curriculum vitae (including a list of publications and a summary of their teaching and research objectives) and request three letters of reference, all to be sent to: **Chairman, Faculty Recruiting Committee, Department of Chemistry, University of California, Berkeley, California 94720.** Deadline for receipt of applications is 1 December 1984. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ANTIDIABETIC SCIENTIST. Our client, an international pharmaceutical company located in the Midwest, needs a Ph.D. in biochemistry or physiology/pharmacology, with 3 to 5 years of experience in diabetes mellitus and a good working knowledge of intermediary metabolism. Send résumé to: **BRUCE ROGERS CO., Executive Search, 20 Main Street, Port Washington, N.Y. 11050.**

ASSISTANT PROFESSOR—FINFISH AQUACULTURE

A tenure-track faculty position supported jointly by the University of Maryland, Center for Environmental and Estuarine Studies, Horn Point Laboratories, and the Cooperative Extension Service, Marine Advisory Service, is available immediately. The successful candidate will be expected to direct the research and extension activities of a developing program in the aquaculture of Striped Bass. Research of interest to the program includes the genetic improvement of brood stock, hybridization, improved spawning methods and larval culture, disease prevention, and nutritional and dietary enhancement. Extension activities are coordinated through the Marine Advisory Program and the Maryland Sea Grant College, and emphasize demonstration projects, outreach and technology transfer, and the dissemination of fish culture techniques to pond owners.

Applicants should hold a Ph.D. in fisheries or aquaculture science and have demonstrated experience and expertise in the culture and management of Striped Bass.

Applications should include a complete résumé and list of publications, and four letters of reference. Applications and references should be directed to:

Dr. Dennis Taylor
Laboratory Head
Horn Point Environmental Laboratories
P.O. Box 775
Cambridge, Md. 21613

The closing date for applications is 1 October 1984. *The University of Maryland is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR—POPULATION GENETICS. Applications are invited for a tenure-track position involving approximately 60 percent research and 40 percent teaching on a 12-month basis. We are seeking a population/evolutionary geneticist using primarily experimental approaches to basic problems in evolutionary biology. Applicants must have a strong background in genetics. Preference will be given to applicants with postdoctoral experience. Send curriculum vitae, reprints of refereed publications, three references, and a summary of research and teaching experience by 1 December 1984 to:

Dr. John G. Scandalios
Professor and Head
Department of Genetics
North Carolina State University
Box 7614
Raleigh, N.C. 27695-7614

North Carolina State University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE RESEARCH ONCOLOGIST

Ph.D. in biological sciences to work independently and collaboratively in basic and applied aspects of targeted chemotherapy of cancer. Degree concentration should have been in biochemistry, biophysics, immunology, cell biology, or pharmacology. Experience required in one or more of the following fields: Targeted chemotherapy, tumor biology, or molecular pharmacology. This is a hospital-based, full-time position; the salary range is \$30,000 to \$38,000 depending on qualifications. The successful candidate must qualify for a full-time research faculty position at the rank of assistant or associate professor in the Department of Medicine at Brown University.

Send résumé by 15 September 1984 to:

Louis A. Leone, M.D.
Chairman, Search Committee
Department of Medical Oncology
Rhode Island Hospital
Providence, R.I. 02902

Rhode Island Hospital is an Equal Opportunity/Affirmative Action Employer and invites applications from minority and protected groups.

POSITIONS OPEN

UNIVERSITY OF WISCONSIN-MADISON SCHOOL OF BUSINESS MANAGEMENT INFORMATION SYSTEM FACULTY POSITION

The Department of Quantitative Analysis is seeking an **ASSISTANT PROFESSOR** to fill a tenure-track position. Candidates should have a Ph.D. and strong research and teaching interests in behavioral and managerial issues in management information systems, preferably in the areas of decision support systems and systems analysis and design. Practical experience is desirable. Send résumés to: **Professor James G. Morris, University of Wisconsin-Madison, School of Business, 1155 Observatory Drive, Madison, Wis. 53706.** *The University of Wisconsin-Madison is an Equal Opportunity/Affirmative Action Employer.*

THE UNIVERSITY OF TEXAS AT DALLAS ASSISTANT PROFESSOR—BIOLOGY

The Biology Programs of The University of Texas at Dallas invite applications from candidates appropriate for a tenure-track position at the assistant professor level beginning preferably 1 June 1985. Applicants should be actively engaged in research in **molecular or cellular biology**, have at least 2 years of postdoctoral experience, and show evidence of independent, productive work sufficient to compete for federal grant support. The university has an upper-level undergraduate biology program and a graduate biology (M.S., Ph.D.) program with extensive research programs in molecular and cellular biology. The successful candidate(s) will be expected to participate in teaching of molecular genetics, supervise graduate students, develop a vigorous and independent research program, and interact with the current faculty. Send curriculum vitae, a short description of research plans, and names of three or more references (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) to:

**Academic Search Number 269
The University of Texas at Dallas
P.O. Box 830688
Richardson, Texas 75083-0688**

Applications should be received by 30 September 1984.

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

ASSISTANT PROFESSOR IN PHARMACODYNAMICS

The newly created Department of Pharmacodynamics invites applicants for a tenure-track position at the assistant professor level. Applicants' research background should be in the areas of pharmacology/physiology, with preference given to individuals with a background in the area of immunopharmacology, toxicology, and cardiovascular physiology/pharmacology. Teaching duties may include contribution in undergraduate physiology/pathophysiology and areas of microbiology. Participation in graduate student education is also encouraged. Desire Ph.D. in physiology or pharmacology with postdoctoral experience. Earliest start time is 1 January 1985. Applicants should submit curriculum vitae, statement of research interests, and three letters of reference by 30 September 1984 to: **Dr. Michael J. Katovich, Chairman of Search Committee, Department of Pharmacodynamics, College of Pharmacy, Box J-4 JHMHC, University of Florida, Gainesville, Fla. 32610.** *An Affirmative Action/Equal Opportunity Employer.*

CELL BIOLOGIST

The research institute of a teaching hospital affiliated with Harvard Medical School seeks applicants for a position of cell biologist. The ongoing active research program concerns cell biology and biochemistry of interaction of blood cells with the vessel wall and the potential applicant should have a demonstrated record of independent research concerning cell biology of the vessel wall. Academic appointment at Harvard Medical School and salary will be based on past performance and current status. Please submit curriculum vitae and the names of three references to: **Box 194, SCIENCE.**

RESEARCH ASSOCIATE

Applicants are being sought to work on cellular receptors for endotoxin lipopolysaccharide in the research institute of a teaching hospital affiliated with Harvard Medical School. Salary will be based on past performance and current status. Submit curriculum vitae and the names of three references to: **Box 195, SCIENCE.**

POSITIONS OPEN

ASSISTANT PROFESSOR OF PLANT PATHOLOGY MYCOLOGY/FUNGAL DISEASES

The Department of Plant Pathology, University of California, Berkeley, announces two tenure-track positions in the area of mycology/fungal diseases. Applicants must have a Ph.D. degree and an interest and capability for original research in plant pathology. It is the intent of the department that one of the appointments be directed toward the molecular biology, biochemistry, or genetics of plant pathogenic fungi and/or host-pathogen interactions. The other appointee will be expected to develop a diversified program in both basic and applied aspects of the biology, ecology, and control of soil-borne plant pathogenic fungi. Teaching responsibilities will include providing graduate instruction in research methods in plant pathology and biology of plant pathogenic fungi. Applicants should submit curriculum vitae, transcripts, publications, and a brief description of research goals, and arrange for three letters of reference to be sent to: **J. G. Hancock, Department of Plant Pathology, University of California, Berkeley, Calif. 94720** by 1 October 1984.

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

HARVARD SCHOOL OF PUBLIC HEALTH ASSISTANT OR ASSOCIATE PROFESSOR POLICY AND DECISION SCIENCES

The Departments of Health Policy and Management and Biostatistics at the Harvard School of Public Health seek a quantitative policy analyst, operations researcher, behavioral scientist, or statistician with strong background in decision sciences, for appointment as assistant or associate professor. This individual will carry out independent and collaborative research relating to quantitative risk analysis, including environmental risks. Research relating to medical decision-making, health program evaluation and technology assessment, as well as methodologic research in decision science, are also encouraged. Responsibilities include teaching in the new graduate program in health decision sciences and advising doctoral students. The position requires a doctoral degree in a pertinent discipline, theoretical or applied technical publications, interest and substantive knowledge in health and/or environmental science and policy, and evidence of strong teaching and writing skills.

Applications are particularly invited from qualified women and minority candidates.

Applicants should send a curriculum vitae and three letters of reference to:

**Professor Milton C. Weinstein
Chair, Search Committee in Decision Sciences
Department of Health Policy and Management
Harvard School of Public Health
677 Huntington Avenue
Boston, Mass. 02115**

BIOCHEMIST—The Scott-Ritchey Program, a privately funded research program established to finance research on health problems of small pet animals, is seeking a qualified biochemist to work with other investigators and undertake independent research projects. This is a tenure-track position requiring a Ph.D. degree and postdoctoral experience in medical biochemical fields. A D.V.M. is preferred. The position is at the level of assistant professor with some graduate teaching. Inquiries should include a letter of application, curriculum vitae, three letters of reference and three reprints of senior author publications. Direct inquiries to: **Dr. R. W. Redding, Scott-Ritchey Research Program, School of Veterinary Medicine, Auburn University, Auburn, Ala. 36849; telephone 205-826-5951.** The position will be available after 1 September 1984. *Auburn University is an Equal Opportunity Employer.*

CARDIOVASCULAR RESEARCH—Applications are invited for a newly created position in the Department of Medicine, New England Deaconess Hospital, a teaching hospital affiliated with Harvard Medical School. Candidates must have clinical training in cardiology or internal medicine, and must also have experience in lipoprotein metabolism or atherosclerosis research. This full-time position will begin at the assistant or associate professor level amidst a stimulating atmosphere and supportive attitude intended to further the development of an academic career in this field of interest. *New England Deaconess Hospital is an Equal Opportunity Employer.* Address inquiries to: **Robert S. Lees, M.D., Director of Medical Research, Department of Medicine, New England Deaconess Hospital, 185 Pilgrim Road, Boston, Mass. 02215.**

Genentech, Inc., on the San Francisco Peninsula, a leader in the field of biotechnology has two openings in Cell Culture Research and Development.

Scientist/Cell Biology

Collaborate with a multi-laboratory inter-disciplinary team to develop an understanding of the regulation of gene expression and gene product secretion. Ability to work in a goal-oriented team environment is essential. Minimum requirements include a PhD in a biochemical discipline and 3-5 yrs. experience in the areas of gene expression and mammalian cell culture. (Refer to #1096).

Sr. Research Associate/Cell Culture

Work on cell culture at an industrial scale. Requires a thorough knowledge of cell culture and familiarity with pharmaceutical production procedures. The ability to innovate novel but practical solutions to problems is highly desirable. You must be capable of independent work and able to undertake troubleshooting and technical auditing. Position requires a min. 3-5 yrs. industrial experience and a BS degree (or equiv.). (Refer to #4065).

Genentech offers an excellent compensation and benefits package coupled with the opportunity to make a significant contribution to our organization. Please send resume, with reference number, to Human Resources Department, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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POSITIONS OPEN

MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACULTY OF MEDICINE

Applications are invited for a tenure-track position in physiology (neuroscience) at the level of **ASSISTANT OR ASSOCIATE PROFESSOR** in the Basic Medical Sciences Division at Memorial University of Newfoundland. The possibility exists for a second position in this area.

Preference will be given to persons with active research interests in the area of neuroscience and the ability to develop an independent research program. The successful candidate will be expected to participate in the teaching of medical, nursing, and science students.

In accordance with Canadian immigration requirements, this advertisement is directed, in the first instance, to Canadian citizens and permanent residents of Canada.

It is hoped to make this appointment during the 1984-1985 academic year, and applications, giving the names of three referees, should be sent as soon as possible to:

Dr. R. S. Neuman
Chairman, Neuroscience Search Committee
Division of Basic Medical Sciences
Faculty of Medicine
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1B 3V6

ASSISTANT SCIENTIST/RESEARCH ASSOCIATE, available immediately to design and develop NMR or HPLC techniques for assessing production and repair of specific types of DNA base damage in mammalian tissue culture cells. A Ph.D. with 1 to 3 years of postdoctoral experience, expertise in NMR or HPLC techniques, and peer reviewed publications required for consideration at the assistant scientist level. Salary: \$16,000 to \$24,000 depending on qualifications. Send curriculum vitae and names of three references before 1 October 1984 to: **Dr. Kenneth Wheeler, Room 140 Nuclear Reactor Center, West 15th Street, Lawrence, Kans. 66045.** An Equal Opportunity/Affirmative Action Employer.

CELL BIOLOGIST to direct Cell Biology Section in Division of Virology, Center for Drugs and Biologics (CDB), Food and Drug Administration (FDA). Division is located at the National Institutes of Health and performs research and review relevant to viral and immunotherapeutic biologicals. Experienced M.D. or Ph.D. equivalent. Inquiries to: **Director, Division of Virology, OBR, CDB, FDA, 8800 Rockville Pike, Bethesda, Md. 20205; telephone: 301-496-3144.**

FULL OR ASSOCIATE PROFESSOR—The Department of Psychology at the University of Mississippi is seeking a senior psychologist with a distinguished record of research and scholarship and a demonstrated ability to attract grant support. The starting date is August 1985. While a clinical psychologist who is licensable in Mississippi and has the ABPP diploma is preferred, applications from others with research interests that are applicable to a clinical program are also invited. Priority will be given to persons with an empirical or behavioral orientation. Duties include teaching graduate and undergraduate courses, the continuation of an active research program, and, for clinical faculty, clinical supervision of graduate students. Depending on the applicant's interests, the position could include a major administrative position in the department. The 13-member department has two doctoral programs: An APA-approved clinical psychology program and an experimental psychology program. The University of Mississippi is 75 miles from Memphis, Tennessee, and is situated in Oxford, a pleasant university community. Salary is competitive. Forward curriculum vitae and a statement of interest to: **Stephen C. Fowler, Professor and Chair, Department of Psychology, University of Mississippi, University, Miss. 38677; telephone: 601-232-7383.** To ensure consideration, applications should be received by 15 October 1984. *The University of Mississippi is an Equal Opportunity Employer.*

RESEARCH ASSOCIATE, available immediately to develop monoclonal antibodies to specific types of DNA base damage and assess the production and repair of these damaged bases in mammalian tissue culture cells. A Ph.D. and expertise in monoclonal antibody techniques is required. Salary \$16,000 to \$18,000, depending on experience. Send curriculum vitae and names of three references before 1 October 1984 to: **Dr. Kenneth Wheeler, Room 140, Nuclear Reactor Center, West 15th Street, Lawrence, Kans. 66045.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CHAIRPERSON OF BIOCHEMISTRY

The School of Medicine, West Virginia University Medical Center, invites applications for the position of professor and chairperson of biochemistry. Applicants should have the Ph.D., M.D., or equivalent degree, a strong and continuing record in research and extramural funding, teaching experience, and evidence of administrative skills. An interest in expanding interdisciplinary research is highly desirable. Applicants should send curriculum vitae and the names of three references to: **Dr. William W. Fleming, Department of Pharmacology and Toxicology, West Virginia University Medical Center, Morgantown, W.Va. 26506.** Applications should be received no later than 1 October 1984. *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON DEPARTMENT OF MICROBIOLOGY

The College of Physicians and Surgeons of Columbia University seeks appropriate candidates for the chair in microbiology. The candidate should possess the Ph.D. or M.D. degree, have an outstanding record of research and teaching accomplishments, and have demonstrated administrative ability. Letters of application should include complete curriculum vitae, bibliography, and a list of referees, and be addressed to:

I. S. Edelman, M.D.
Chairman, Department of Biochemistry
Columbia University College of
Physicians and Surgeons
630 West 168 Street
New York, N.Y. 10032

Columbia University is an Equal Opportunity/Affirmative Action Employer.

CHAIRMAN, DEPARTMENT OF ANATOMY (SEARCH REOPENED)

Applications and nominations are invited for the position of chairman of the Department of Anatomy, Colorado State University (CSU). The department chairman will assume a major role in the direction and development of programs in modern anatomy and cell biology. The candidate must have a Ph.D. degree and a distinguished academic and research record. A D.V.M. or M.D. degree and experience with national granting agencies are desirable. The department chairman will direct teaching and research programs in veterinary and human anatomy, cell biology, neurobiology, and associated anatomical sciences. Departmental research facilities include state-of-the-art analytical transmission and scanning electron microscopy and freeze-fracture technology. Applicants please submit a letter of intent, curriculum vitae, and three letters of reference to: **Edward A. Hoover, Chairman, Anatomy Search Committee, Department of Pathology, Colorado State University, Fort Collins, Colo. 80523.** Closing date is 31 October 1984 or until the position is filled. *CSU is an Equal Opportunity/Affirmative Action Employer.*

IMMUNOLOGY/MEMBRANE BIOCHEMISTRY POSTDOCTORALS

Two positions, one to study surface/functional changes in macrophages exposed to gamma interferon (available immediately), the other to isolate the receptor for gamma interferon expressed by macrophages (available after 1 January 1985). Highly competitive stipends. Send curriculum vitae and three references to: **Dr. Stephen W. Russell, Department of Comparative and Experimental Pathology, Box J-145, JHMC, University of Florida, Gainesville, Fla. 32610.** *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

MICROBIAL PHYSIOLOGIST

Position at the assistant professor level available for January 1985. Microbial physiologist with postdoctoral experience to teach a sophomore level cell biology course and develop and teach an upper-level/graduate course in microbial physiology and bioenergetics and/or membrane biology. Experience with microbial fermentations or anaerobic organisms preferred but not required. Successful candidate is expected to conduct an active research program involving undergraduates and Master's students.

Please send letter of application, curriculum vitae, and letters from three references before 30 September to:

Dr. Daniel Burke, Chairman
Department of Biology
Seton Hall University
South Orange, N.J. 07079

An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

CHEMIST-APPLIED MOLECULAR BIOLOGY

The Microbiology Department of Sigma Chemical Company has an opening for a Ph.D. trained in biochemical genetics. Responsibilities include technical support and future development of the full complement of nucleic acids and related enzymes. Applicants must be familiar with the practice and direction of development of molecular biology techniques. This position offers a stimulating entrepreneurial work environment within our rapidly expanding department. References will not be contacted without prior approval. Please send résumé to:

Personnel Manager
Sigma Chemical Company
P.O. Box 14508
St. Louis, Mo. 63178
An Equal Opportunity Employer, M/F



DEAN OF THE FACULTY TRINITY COLLEGE Hartford, Connecticut

Applications and nominations are invited for the position of dean of the faculty; appointment to begin on or before 1 July 1985. The dean is the chief academic officer of the college and is responsible for overseeing and developing its academic programs and its faculty.

Qualifications: Ph.D. or equivalent; scholarly achievement in the liberal arts or sciences; experience in academic administration; ability as a teacher.

The dean, the senior officer responsible for the instructional budget, reports directly to the president, supervises department and program chairpersons in their recruitment and review of faculty, and directs the offices of the associate academic dean and the associate administrative dean.

The salary will be commensurate with the candidate's experience and qualifications. A decision on the appointment is expected by 15 January 1985. All applications will be acknowledged.

Applications with the names of five references should be sent by 1 October 1984 to:

Office of the President
Trinity College
Hartford, Conn. 06106

An Equal Opportunity/Affirmative Action Employer

DIRECTOR OF BIOMEDICAL ENGINEERING PROGRAM University of Massachusetts Medical Center, Worcester

Nominations and applications are invited for the position of director of the newly created Interdepartmental Biomedical Engineering Program at the University of Massachusetts Medical Center, a major educational and tertiary care facility in Worcester. The director will be responsible for developing and administering the program in biomedical engineering at Worcester Polytechnic Institute, and will hold a faculty appointment as associate or full professor in both institutions, with tenure-track status at the medical center.

Qualifications: A doctorate in biomedical engineering or related engineering field; at least 5 years of academic experience in biomedical engineering; demonstrated administrative abilities, and strong teaching credentials with an active funded research program. Position available now. Salary and benefits competitive. Please submit curriculum vitae and five references to:

Gary Welch, M.D., Ph.D.
Chair, Department of Anesthesiology
University of Massachusetts Medical Center
55 Lake Avenue North
Worcester, Mass. 01605
Telephone: 617-856-3266

The University of Massachusetts Medical Center and Worcester Polytechnic Institute are both Affirmative Action/Equal Opportunity Employers.

Molecular Biologist

We are seeking resumes from candidates to work in our Biological Sciences research group located in Richmond, California. The candidate would be part of an expanding research team involved in the molecular biology of plants. Collaboration with related programs in genetic engineering and cell biology is expected.

Candidates must possess a PhD, or equivalent, in Molecular Biology, Biochemistry, or related field, and preferably two years' postdoctoral experience demonstrating laboratory expertise in recombinant DNA technology. Experience in plants is also preferable, but not a prerequisite for qualifications.

Stauffer Chemical Company offers a competitive salary and fringe benefits package in addition to an attractive San Francisco Bay Area location.

Qualified applicants are invited to send resumes to: K.D. McLaren, Stauffer Chemical Company, 1200 So. 47th Street, Richmond, California 94804.

Stauffer Chemical Company is an Equal Opportunity Employer. M/F.



Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
naturelles et en génie du Canada

VISITING FELLOWSHIPS in CANADIAN GOVERNMENT LABORATORIES 1985-1986

The Natural Sciences and Engineering Research Council of Canada offers visiting fellowships in Canadian Government Laboratories to provide promising young scientists with the opportunity to work with well-established research groups and leaders in their fields. These fellowships are tenable in the laboratories of the following departments and agencies:

Agriculture Canada
Atomic Energy of Canada Limited
Communications Canada
Energy, Mines and Resources
Environment Canada

Fisheries and Oceans Canada
Health and Welfare Canada
National Defence
National Museums of Canada
National Research Council Canada

Eligibility: Applicants should have received a doctorate from a recognized university within the last five years or a master's degree followed by at least two years of research experience.

There are no citizenship restrictions. However, successful candidates who are not Canadians or permanent residents of Canada must satisfy Canadian immigration requirements.

Stipend: Fellowships have an annual value of \$26,760 plus a travel allowance.

Duration of Tenure: Appointments are made for one year; renewals for a second year are possible.

Application Procedures: The deadline for receipt of applications is January 15, 1985. Information regarding application procedures may be obtained from the: Natural Sciences and Engineering Research Council, 200 Kent Street, Ottawa, Ontario, Canada K1A 1H5. Telephone: (613) 995-5521.

Canada

MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACULTY OF SCIENCE HEADSHIP DEPARTMENT OF MATHEMATICS AND STATISTICS

The Faculty of Science invites applications for the post of head of the Department of Mathematics and Statistics. The department currently consists of 47 full-time academic members and offers programs leading to graduate and undergraduate degrees in mathematics and statistics and joint programs with other disciplines. The department and the faculty intend to continue to build a strong research school without neglecting the development of the undergraduate programs. Present areas of research interest include: Numerical analysis, algebraic topology, statistics, and applied mathematics.

Candidates should possess a substantial record of research achievement, nationally and internationally, and be able to demonstrate the qualities of leadership appropriate to the development and co-ordination of a large department with substantial undergraduate commitments. Provision is made for the appointment of a deputy head, if required.

Applications should be sent to:

Dean P. J. Heald, Chairman
Mathematics and Statistics Headship
Search Committee, Faculty of Science
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1B 3X7
and should include full curriculum vitae and the names of six referees (two of whom can appraise the candidate's leadership and organizational abilities). Date of appointment is 1 September 1985 or earlier. Closing date for applications is 31 October 1984. (Position subject to budgetary approval.)

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents, in the first instance.

KING SAUD UNIVERSITY (formerly University of Riyadh) RIYADH, SAUDI ARABIA



COLLEGE OF AGRICULTURE AND VETERINARY MEDICINE AL GASSIM BRANCH

The college has vacant faculty positions for Ph.D. holders and/or holders of academic titles earned at accredited universities, as Assistant Professor in the following fields:

VEGETABLE CROP, INDOOR PLANTS, SOLID PHYSICS, SOIL CHEMISTRY, IRRIGATION AND DRAINAGE, AND FARM MANAGEMENT.

The language of instruction is ARABIC.

NOTEWORTHY BENEFITS:

Free return air tickets annually for faculty members and family
Furnished accommodation or housing and furnishing allowances
Monthly transportation allowance

Free medical and dental care covering family

Contribution by university to tuition fees of non-Arabic speaking children

Interested academicians are kindly requested to send non-returnable photocopies of their academic and specialized experience certificates together with their resumes including lists of their publications and references and written applications indicating the position applied for and the subjects the applicant is qualified to teach to the following address:

DEAN,
COLLEGE OF AGRICULTURE & VETERINARY MEDICINE
KING SAUD UNIVERSITY
P. O. Box 1482
BURAIDAH, AL GASSIM, KINGDOM OF SAUDI ARABIA

POSITIONS OPEN

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY DEPUTY DIRECTOR FOR RESEARCH

Applicants are invited to apply for deputy director for research at the Environmental Research Laboratory, Narragansett, Rhode Island. The deputy director has the responsibility for developing, planning, reviewing, evaluating, and coordinating national research programs to evaluate the occurrence, distribution, and environmental impact of pollution on marine environments which will provide the technical basis for regulating single chemicals and complex mixtures in ocean discharges, ocean dumping, and estuaries in general. Applicants must be U.S. citizens, possess a Ph.D. or equivalent in the physical or environmental sciences or related areas, have experience in managing state-of-the-art research programs, and have postdoctoral experience in laboratory research and field investigations, experience in the field of water pollution research, and a reputation as a recognized authority in his/her area of research specialization as evidenced by publications/presentations. Salary range is \$50,495 to \$65,642. Applications (SF-171, "Personal Qualifications Statement," available at most federal agencies) should be sent to: **Sharon Johnson, EPA Personnel Office, P.O. Box 18417, Las Vegas, Nev. 89114**, no later than 14 September 1984. *The United States Environmental Protection Agency is an Equal Employment Opportunity Employer.*

FACULTY POSITION—BIOCHEMISTRY

ASSISTANT PROFESSOR OF CHEMISTRY. The Department of Chemistry at The University of Texas at Austin solicits applications for a tenure-track faculty position at the **assistant professor** level beginning January or September 1985. Candidates who have demonstrated exceptional ability in the area of **biochemistry-molecular biology** and show promise in teaching should forward curriculum vitae, short description of proposed research plans, and names of three references by 1 November 1984 to: **Dr. Marvin L. Hackert, Biochemistry Search Committee, Department of Chemistry, The University of Texas at Austin, Austin, Texas 78712.** *The University of Texas is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

DIRECTOR MICHIGAN STATE UNIVERSITY DEPARTMENT OF ENERGY PLANT RESEARCH

Applications for the position of director of the U.S. Department of Energy Plant Research Laboratory at Michigan State University are invited from plant scientists with an outstanding record of research achievement. We seek an individual who will maintain an active research program, who is capable of providing scientific leadership, and who is willing to oversee the administration of the 12 to 14 active research groups which comprise the Plant Research Laboratory. Since the mission of the Plant Research Laboratory involves the solution of energy-related problems in the plant sciences, the director should be appreciative of both basic and applied research in the plant sciences and should have a desire to participate in the formulation and implementation of research initiatives in these areas. Recruitment of new faculty in the near future is anticipated. The director will be appointed as a tenured professor in an appropriate academic department at Michigan State University. The salary is intended to be attractive, and access to laboratory space, research facilities and levels of ongoing research support are exceptional.

Inquiries or applications stating full professional details and names of at least three referees should be directed to: **C. R. Somerville, Chairman, PRL Search Committee, MSU-DOE Plant Research Laboratory, Michigan State University, East Lansing, Mich. 48824-1312; telephone: 517-355-5159.** Applications should be received by 15 October 1984.

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

EDITOR—biotech abstracts. Edit journal, magazine summaries for scientific and business print and online product. Must be familiar with basic biotechnology research methods. Editorial and production experience, information science, computer knowledge helpful. Full-time in New York offices. Opportunity for rapid growth in database field. **Telephone: Laura Weiss, 212-944-8500, extension 130.**

POSITIONS OPEN

FACULTY POSITIONS. Two or three tenure-track faculty positions available for fall 1985. Applications in fields of analytical, inorganic, organic, and physical chemistry will be accepted. First preference will be given to individuals wishing to apply chemistry to problems in material science. Commitment to an intensive research program and to teaching at both graduate and undergraduate levels is essential. Salary and rank dependent upon qualifications. Consideration of applications will begin on 1 October but later applications will be accepted until the positions are filled. Please submit curriculum vitae, including a description of future research plans, one letter of recommendation, and names and telephone numbers of three additional references to: **Professor Riley Schaeffer, Chemistry Department, University of New Mexico, Albuquerque, N.M. 87131.** *An Equal Opportunity/Affirmative Action Employer.*

INSTRUCTOR. M.D. degree. Residency in clinical pathology. Three years of postdoctoral training studying the immunological mechanism of rejection and tolerance to cultured endocrine allografts. Teaching experience. Needed to run a research laboratory with minimal supervision, for the study, treatment, and prevention of childhood diabetes. Salary: \$18,000. Starting 1 January 1985. Send résumé to: **Karin Peterson, Box C-321, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, Colo. 80262.** *The University of Colorado Health Sciences Center is an Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF QUEENSLAND LECTURER IN MATHEMATICS (STATISTICS) (tenurable) MATHEMATICS

Higher degree and research experience in one or more branches of mathematical statistics.

Salary per annum: \$A24,353 to \$A31,994. Commencement: February 1985. Closing date 21 September 1984. Reference: 29184.

Additional information and application forms available from the staff officer. Applications to: **The Staff Officer, University of Queensland, St. Lucia, 4067, Queensland, Australia.**

NEUROELECTROPHYSIOLOGIST- PHARMACOLOGIST

An immediate opening exists in the Department of Pharmacology for a PhD level person, preferably with 2 years post-doctoral experience, to participate in our CNS research program. The position requires research, utilizing electrophysiological techniques, into the mechanisms of action of current and new psychotropic drugs. Expertise in recording of single and multiple unit activity IN VIVO and the computer-based acquisition and analysis of such data is essential.

CARDIAC ELECTROPHYSIOLOGIST- PHARMACOLOGIST

An immediate opening also exists in the Department of Pharmacology for a PhD level person, with preferably 2 years post-doctoral experience, to participate in our cardiovascular research program. The position requires research to investigate and identify new approaches and novel agents for the treatment of heart disease, especially arrhythmias, using cardiac cellular electrophysiological techniques. Direct inquiries including a resume to:

Merrell Dow

Personnel Services Manager

**MERRELL DOW RESEARCH CENTER
2110 East Galbraith Road
Cincinnati, Ohio 45215**

Equal Opportunity Employer M/F/H/V

Senior Scientist

The Neurosciences Section of the Biosciences Laboratory is seeking an energetic scientist with a PhD degree and postdoctoral research experience in neuromuscular physiology. A strong background in biomedical engineering and in the use of laboratory computers are required. Applicants with experience in conducting clinical research are preferred. The scientist is expected to collaborate in an interdisciplinary group and to develop a research program in neuromuscular physiology.

Please send your resume in confidence to James S. Egan.

**Staffing & Employee
Resources/3M
224 1W 3M Center
St. Paul, Minnesota 55144**

We Are An Equal Opportunity Employer M/F/H/V

3M

POSITIONS OPEN

ENZYMOLOGIST—IMMUNOLOGIST—Ph.D. Opportunity in private industry to head team to develop new concept in immunoassay. Qualified candidate must have 3 years plus of experience in enzymology. Experience with monoclonal antibodies and/or immunoassay desirable. Some supervisory or management experience preferred. Salary: \$40,000 minimum. Send résumé to: **Midwest Research Microscopy, Inc., 5510 West Florist Avenue, Milwaukee, Wis. 53218, attention: Robert F. Dragen.**

GEOCHEMIST

The University of California, Davis, Department of Geology, has an opening for a 1-year temporary faculty position for fall 1984. Specific fields are open; however specialization in isotope and economic geochemistry is desirable. The department has strong programs in paleobiology, paleoceanography, petrology, geophysics, and crust and mantle evolution. A Ph.D. is required. Responsibilities include graduate and undergraduate teaching and research in geochemistry.

Applicants should submit curriculum vitae, statement of research and teaching interests, and the names of three references as soon as possible, as the position is for the fall 1984 quarter.

We anticipate that this position will be opened on a permanent, tenure-track basis during the next academic year. A successful candidate for this temporary position can apply for the tenure-track position. Inquiries and applications should be sent to: **Chair, Search Committee, Department of Geology, University of California, Davis, California 95616. The University of California is an Equal Opportunity/Affirmative Action Employer.**

MEDICAL ONCOLOGIST—RESEARCHER—Must have a strong clinical commitment and significant research background, including but not restricted to the applications of monoclonal antibodies and molecular biology to clinical problems, new methods of immunotherapy, and biological modifiers. Background suited to collaboration with strong basic science group recently developed in the Cancer Center. Rank depends on qualifications. Send curriculum vitae, representative reprints, and statement of interests and research goals to: **Thomas Tomasi, M.D., Ph.D., Director, Cancer Center, University of New Mexico, Albuquerque, N.M. 87131. Affirmative Action/Equal Opportunity Employer.**

NMR SPECTROSCOPIST. The University of California at Davis (UCD) is seeking a full-time (11-month) nuclear magnetic resonance (NMR) spectroscopist at the assistant research spectroscopist level to be a staff member of the UCD NMR facility with primary responsibilities with the facility's 1.89-tesla, 200-mm bore topical magnetic resonance (TMR) spectrometer. Applicants must be knowledgeable in Fourier transform NMR, and have a Ph.D. degree in an applicable science or the equivalent in experience. The ability to interact well with researchers in the biological sciences is essential, and participation in collaborative research with members of the UCD faculty is expected. The opportunity for independent research exists as well. The successful applicant will be expected to operate and perform maintenance duties on the TMR spectrometer, and to assist users in spectrometer operation and in interpretation of data. Experience with TMR spectroscopy and electronics experience would be desirable, but are not required. Additional instrumentation at the UCD NMR facility includes NMR spectrometers operating at proton frequencies at 500, 360, and 200 MHz. This is a nontenure-track research position with a salary range of \$25,100 to \$33,100, commensurate with experience. Send a résumé and three letters of reference to: **Dr. Gerald B. Matson, Operations Manager, UCD NMR Facility, University of California, Davis, Calif. 95616. Closing date: 1 October 1984. The University of California is an Equal Opportunity/Affirmative Action Employer.**

OCEANOGRAPHER AT STONY BROOK. We anticipate a tenure-track position at assistant professor level for physical oceanographer, coastal geologist, or coastal engineer. Interest in coastal ocean dynamics, waves, or shore processes preferred. Position carries full support for the academic year and could be available as early as January 1985. Candidates should send a résumé and the names of three individuals from whom letters of reference may be obtained to: **Dr. Robert E. Wilson, Marine Sciences Research Center, State University of New York (SUNY) Stony Brook, Stony Brook, N.Y. 11794-5000. Closing date 5 October 1984. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer.**

Cetus Corporation, an innovative leader in biotechnology, is seeking researchers to fill positions in basic research and in product development.

SCIENTIST — To develop strategies for formulation and stabilization of therapeutic proteins. Applicants should have a Ph.D. in Protein Chemistry or Pharmaceutical Chemistry with at least two years of industrial postdoctoral experience in a relevant field.

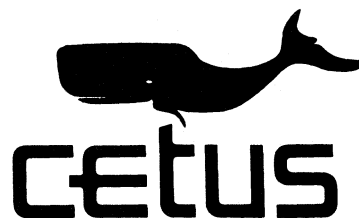
ASSOCIATE SCIENTIST — Applicants should have a Ph.D. with expertise in the regulation of human or murine IgE.

ASSOCIATE SCIENTIST — Applicants should have a Ph.D. and a background in CSF and bone marrow culture.

RESEARCH ASSISTANT/ASSOCIATE — To aid in the construction and analysis of immunotoxins. Applicants should have a B.S./M.S. in Biochemistry, Chemistry, or Biology. Two or more years in laboratory experience with strong skills in HPLC, chromatography, and protein purification are required.

Please send resumes in confidence to:

**Cetus Corporation
Box SFRB
1400 Fifty-third Street
Emeryville, CA 94608**



equal opportunity employer m/f/handicapped



Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
naturelles et en génie du Canada

RESEARCH FELLOWSHIPS

1985

The Natural Sciences and Engineering Research Council of Canada (NSERC) offers research fellowships to expand career opportunities for a select number of very promising researchers in the natural sciences and engineering. These awards are tenable in universities or industries in Canada commencing in 1985.

Eligibility	Canadian citizens or permanent residents of Canada holding a doctorate in science or engineering, preferably with post-doctoral research experience of five years or less.
Nature of Appointment	Fellows will be employees of the university or industrial firm for the duration of the award and will be engaged in research, development, or innovation activities.
Duration of Appointment	a) University Research Fellowships: Up to five years based on satisfactory performance; possibility of renewal for a second 5-year term. b) Industrial Research Fellowships: Up to three years based on satisfactory performance.
Remuneration	a) University Research Fellowships: Salary is determined by the university; NSERC will reimburse the university up to \$30,500 per annum towards the cost of each fellow's salary; fellows will also receive a three-year research grant. b) Industrial Research Fellowships: Salary is determined by the industrial firm; NSERC will reimburse the firm up to \$25,900 per annum towards the fellow's salary.
Application Procedures	Contact the Canadian university or industrial firm of your choice to carry out appropriate negotiations concerning research plans, terms and conditions of appointment, salary, etc. Nominations must be submitted to NSERC by universities or industrial firms, as the case may be. Applications submitted directly to NSERC by candidates cannot be accepted.
Date of Submission	a) 1 November 1984 for University Research Fellowships. b) anytime for Industrial Research Fellowships.

For more information, contact the:

**Research Fellowships Officer
Natural Sciences and Engineering Research Council
200 Kent Street, Ottawa, Ontario, Canada K1A 1H5
Telephone: (613) 995-5521**

Canada

POSITIONS OPEN

CELL BIOLOGY/ANATOMY (two positions). Mid-career, funded investigator for the John Sheinin Professorship of Anatomy, who will provide scientific leadership in the anatomical sciences to a department with a strong emphasis on research and scholarly activity. A second position is available for an assistant or associate professor with an established research program. Both positions require the ability to teach histology or gross anatomy to medical and graduate students. The Chicago Medical School is located 38 miles north of downtown Chicago in new, well-equipped facilities. Several active programs have been added to this department in the last year. Submit curriculum vitae and three references to: **Dr. Robert G. Kemp, Ph.D., Department of Biological Chemistry and Structure, University of Health Sciences/The Chicago Medical School, 3333 Green Bay Road, North Chicago, Ill. 60064.**

CELL BIOLOGIST/BIOCHEMIST

Merck Sharp & Dohme Research Laboratories is currently seeking a highly motivated individual to join a research group that is studying chemotaxis in leukocytes using both genetic and biochemical approaches. The individual should have an M.S. or B.S. degree with research experience and a strong background in cell biology and/or biochemistry. Salary, benefits and growth potential are excellent. Send curriculum vitae to:

**S. R. Jenkins
Merck & Co., Inc.
P.O. Box 2000
Rahway, N.J. 07065**

An Equal Opportunity Employer

GREEMAN-PETTY PROFESSOR OF VISION DEVELOPMENT

The College of Optometry at the University of Houston, University Park, is seeking candidates for an endowed professorship in vision development with a special emphasis on research, development, and teaching optometric treatment of vision processing disorders related to learning problems. The vision scientist selected is expected to provide scholarly leadership in the area of vision development and collaborate with practitioners and other vision scientists at the college.

The application deadline is 7 September 1984 and the position will be filled on or about 7 September 1985.

Send nominations and/or curriculum vitae to:

**Search Committee
Greeman-Petty Professorship
University of Houston
University Park
College of Optometry
4901 Calhoun Street
Houston, Texas 77004**

An Equal Opportunity Employer

IMMUNOLOGIST

Applications are invited for a tenure-track faculty appointment in the Department of Microbiology and Immunology, University of North Carolina Medical School, Chapel Hill. Initial appointment will likely be at the level of assistant professor. We seek an individual with a demonstrated capability of conducting an independent research program in immunogenetics and/or cellular immunology and who will participate in the teaching of immunology to graduate and medical students. This position will be available in spring 1985. *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. We encourage applications from and nominations of minority and female candidates; such persons may identify themselves voluntarily.* Reply by 15 October 1984 with curriculum vitae and names and addresses of references to: **Geoffrey Haughton, Ph.D., 804 Faculty Laboratory Office Building 231H, University of North Carolina, Chapel Hill, N.C. 27514.**

POSTDOCTORAL POSITIONS are available for research on the biochemistry and molecular biology of the components of **CONNECTIVE TISSUES**. A background in collagen proteoglycan or glycoprotein in biochemistry with experience in cell or molecular biology is desirable. Applicants must have United States citizenship or permanent resident status. Send résumé to: **N. A. Kefalides, M.D., Ph.D., Connective Tissue Research Institute, University of Pennsylvania, University City Science Center, 3624 Market Street, Philadelphia, Pa. 19104. An Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

MOLECULAR BIOLOGIST, MICROBIOLOGIST

The Department of Pathobiology is searching for a molecular biologist/microbiologist interested in the cloning and expression of antigens of *Chlamydia trachomatis* and other difficult to cultivate microorganisms. This person will interact with a well-established laboratory interested in the detection and prevention of chlamydial infections. Applicants should possess a Ph.D. in microbiology or related area with strong experience in genetic engineering. Experience in infectious diseases and monoclonal antibodies would be advantageous. Appointment will be made at instructor through associate professor level as appropriate to past experience. Starting date is 1 October 1984 or later. Send curriculum vitae, names of three references, and statement of objectives to: **Dr. George E. Kenny, Department of Pathobiology SC-38, University of Washington, Seattle, Wash. 98195 by 15 September 1984. The University of Washington is an Equal Opportunity/Affirmative Action Employer.**

MOLECULAR GENETICIST. The Department of Biological Chemistry of the Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, Pennsylvania, is accepting applications for a tenure-track position for an assistant or associate professor. Candidates should have a Ph.D. degree and a minimum of 2 years of postdoctoral research experience in molecular genetics. The appointee will be expected to develop a strong basic research program involving a genetically tractable system. The appointee will be the first of two new positions to be filled in the molecular genetics area, and will enlarge the core group of molecular biologists currently within the department.

Salary and position level will be commensurate with training and experience. Candidates should send curriculum vitae, a one-page statement of research interests, reprints of pertinent publications, and the names of at least three persons willing to act as references to: **Dr. James E. Hopper, Chairman, Search Committee, Department of Biological Chemistry, P.O. Box A, The Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, Pa. 17033.**

The Pennsylvania State University is an Equal Opportunity/Affirmative Action Employer, M/F.

PHARMACOLOGIST-TOXICOLOGIST. The Department of Pharmacology and Therapeutics, Schools of Medicine and Dentistry, invites applications for two full-time faculty positions as **ASSISTANT PROFESSOR**. Positions offer opportunities for basic research and teaching. Candidates must have a Ph.D. degree in pharmacology-toxicology or a closely related discipline, or an M.D. degree with appropriate training in basic pharmacology-toxicology. Postdoctoral experience and evidence of ability to conduct independent research in pharmacology-toxicology, for example publications and grants obtained, are required. Preference is for a strong background in molecular-cellular pharmacology for one position, and toxicology for the other. Send curriculum vitae and also request that three letters of recommendation be sent to: **Dr. Edward A. Carr, Jr., 127 Farber Hall, State University of New York at Buffalo, Buffalo, New York 14214. An Equal Opportunity/Affirmative Action Employer.**

PLANT PHYSIOLOGIST, at GS-11 (\$25,489) or GS-12 (\$30,549), grade based on qualifications. One federal career civil service position with United States Department of Agriculture (USDA)-Agricultural Research Service (ARS) in Weslaco, Texas, to conduct basic research in the physiology/biochemistry of sugarcane and sweet sorghum. Research objectives include the effect of production/handling variables on basic mechanisms regulating and controlling sugar yield from sugarcane and sweet sorghum. Strong background in plant physiology and biochemistry preferred. Ph.D. or equivalent education/experience required. Candidate must be United States citizen. *Equal Opportunity Employer.* For application procedures contact: **L. G. Burkes, SR-102-84; USDA-ARS-PD-POB; Southern Region Section; Building 417, BARC-East; Beltsville, Md. 20705. Telephone: 301-344-1508.**

POSTDOCTORAL POSITION available immediately to work on a project identifying, isolating, cloning, and characterizing the human genes directing the synthesis of the cytochrome P-450. Knowledge of recombinant DNA technologies would be helpful but not mandatory. Send curriculum vitae and names and addresses of three references to: **Dr. P. S. Guzelian, Medical College of Virginia, Box 267, Richmond, Va. 23298.**

POSITIONS OPEN

PHYSICS ASSISTANT

Immediate placement available to the qualified candidate in Regional Radiation Therapy Center. Position responsibilities include: developing department policy/procedure, staff education, calibrating equipment, planning patient treatment.

Minimum placement requirements: B.S. in physics, preferably with 2 years of experience in medical application or degree in a related science. For further information, please contact: **Sandy Mahon, Employment Manager, Washoe Medical Center, 77 Pringle Way, Reno, Nevada 89520. An Equal Opportunity Employer.**

POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE. The Research Laboratory of Saint Francis Hospital and Medical Center, a 700-bed, University of Connecticut-affiliated hospital in Hartford, Connecticut, is seeking a candidate to work on the regulation of bone formation in vitro and the purification and development of assays for bone-derived growth factors. Experience in molecular biology, biochemistry, and monoclonal antibodies preferable. Forward résumé to:

**Ernesto Canalis, M.D., Director of Research Laboratory
SAINT FRANCIS HOSPITAL AND MEDICAL CENTER
114 Woodland Street
Hartford, Connecticut 06105**

An Equal Opportunity/Affirmative Action Employer. We hire qualified handicapped individuals.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE for molecular studies on acute nonlymphocytic leukemia. Research will involve construction of recombinant DNA libraries and somatic cell hybridization mapping of sequences to specific chromosomal regions. Background in recombinant DNA preferred. Send curriculum vitae and names of three references to: **Dr. Rosann Farber, Department of Molecular Genetics and Cell Biology, The University of Chicago, 920 East 58th Street, Chicago, Ill. 60637. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION in the Boston area, available 7 September 1984. Laboratory research interests are in the area of estrogen regulation of gene expression and cell proliferation. Applicants with expertise in nucleic acid biochemistry, recombinant DNA technology, cell culture, and the microinjection of somatic cells will be considered. Send curriculum vitae and the names of references to: **Dr. Lawrence J. Weng, Department of Biology, Brandeis University, 415 South Street, Waltham, Mass. 02254.**

POSTDOCTORAL POSITIONS AVAILABLE immediately to study (i) the enzymology of cytochrome P-450 and carcinogen metabolism or (ii) the metabolism and functions of retinoids and carotenoids. Qualified candidates with previous postdoctoral experience may be appointed as assistant professor co-terminous. Send curriculum vitae to: **Dr. Chung S. Yang, Department of Biochemistry, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, Newark, N.J. 07103.**

A **POSTDOCTORAL POSITION** is available immediately in **NEUROSCIENCE** to conduct studies on the geometrical alterations of neurons in animal models of neuronal storage disease. Candidates should be experienced with Golgi methodology, computerized morphometrics, and/or statistical techniques, be a United States citizen or permanent resident, and possess an advanced degree (Ph.D., M.D. or equivalent). Salary is commensurate with qualifications and experience. Résumé and two letters of recommendation to:

**Dr. Steven U. Walkley
Department of Neuroscience
Albert Einstein College of Medicine
Bronx, New York 10461**

We are an Equal Opportunity Employer

POSTDOCTORAL POSITION for recent Ph.D. or M.D., United States citizen or permanent resident, available immediately, supported by NIH training grant (National Research Service Awards), in the area of basic cancer chemotherapy, clinical cancer chemotherapy, cancer biology (including radiation biology), or cancer drug development (organic synthesis). Application deadline: One month. Send résumé indicating area(s) of interest and two or more letters of reference to: **Dr. Sungman Cha, Brown University, Box G, Providence, R.I. 02912; telephone: 401-863-3114. An Equal Opportunity/Affirmative Action Employer.**

Neurochemist/Biochemical Pharmacologist

Ph.D. Level

Continued expansion at the Warner-Lambert/Parke-Davis Pharmaceutical Research Division has generated an immediate opportunity within the Biochemistry Section in the Pharmacology Department.

The successful candidate will have:

- Ph.D. or equivalent in Pharmacology or Neurochemistry and 0-3 years postdoctoral experience with a documented record of research excellence.
- Research experience in receptor mechanisms or neuropeptide metabolism with an interest in neurological and cerebrovascular diseases.
- Excellent communication skills and the capacity to collaborate in a team approach to drug discovery.

Our research facilities adjacent to the University of Michigan campus in Ann Arbor, Michigan are among the finest and best equipped in the world and are devoted exclusively to the discovery and development of new drugs. Send resume with salary requirements and references in confidence to: Ms. D. Love, Human Resources Supervisor, Dept. #2784, WARNER-LAMBERT/PARKE-DAVIS, Pharmaceutical Research Division, 2800 Plymouth Road, Ann Arbor, MI 48105.

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**WARNER
LAMBERT**

Biochemist, MS

The Metabolic Diseases and General Pharmacology Department of Pfizer Central Research has an immediate opening for a Laboratory Assistant to be part of a multidisciplinary research team.

Typical duties will include assisting in the discovery of potential anti-ulcer drugs via the development and operation of *in vitro* and *in vivo* biological test systems. Additional duties will include the isolation of specific subcellular membrane fractions, measurement of a variety of cellular enzymes, and determination of the effects of various chemicals and drugs on selected enzymes.

Qualified applicants should have a Master's degree in biochemistry with experience in membrane biochemistry, protein purification and enzymology or a Bachelor's degree in biology or biochemistry with similar experience.

This position offers a stimulating professional environment in an attractive southeastern Connecticut shore area, complemented by a competitive salary/benefits package and relocation assistance. Forward your resume, description of research and references to: Charles P. Norris, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

Pfizer

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At the School of Sciences at the Technische Universität Braunschweig (Braunschweig Institute of Technology) and at the Gesellschaft für Biotechnologische Forschung GmbH in Braunschweig-Stöckheim (Institute for Biotechnological Research, GBF) four positions are open for professorships in the fields of:

1. Biological process engineering
2. Microbiology
3. Enzyme Technology
4. Genetics.

The successful applicants for each of these positions will be offered a chair as Professor at the Technische Universität Braunschweig and then will be delegated to the GBF to become head of a department. The GBF is a large research center, supported by the Federal Government.

The heads of departments in the GBF will be expected to work in one independent research field and shape the GBF's joint research and development programmes. The TU Braunschweig expects active participation in the new programmes of biotechnology and biological process engineering.

Applicants must have a Ph.D. in Science or Engineering and should be highly qualified in one of the above noted fields, documented by a distinct research record and teaching experience.

Applications should be sent to the following address not later than August 24, 1984:

Der Vorsitzende der Naturwissenschaftlichen Fakultät der TU Braunschweig, Pockelsstraße 14, D-3300 Braunschweig, who will give further information on special request.

Pulmonary Pharmacologist

Sterling-Winthrop Research Institute announces an opening for an experienced Pulmonary Pharmacologist. This scientist will lead a drug discovery team investigating pulmonary disease.

The successful candidate will have a PhD in Pharmacology or Physiology and at least 2 years of relevant industrial experience with a background in the area of IN VIVO and IN VITRO models of pulmonary disease. A record of publication indicating ability to undertake independent and creative research is required.

We offer an attractive salary and benefits package with the opportunity for professional growth. The Institute is located near Albany, New York, which is a major center for summer and winter recreational activities.

Please send CV including salary requirements in confidence to:

Mr. William F. Sheldon
Employee Relations Administrator



**STERLING-WINTHROP
RESEARCH INSTITUTE**

A Division of Sterling Drug Inc.
Columbia Turnpike
Rensselaer, New York 12144
Equal Opportunity Employer, M/F/H

POSITIONS OPEN

POSTDOCTORAL POSITION available for studies in central histaminergic actions. Individual should have experience with stereotaxic and B.P. measurements. Send curriculum vitae and two references to: **Dr. S. B. Gertner, Department of Pharmacology, University of Medicine and Dentistry of New Jersey—New Jersey Medical School, Newark, N.J. 07103.**

POSTDOCTORAL POSITION

Applications are invited for postdoctoral research in the field of molecular genetics of prokaryotes. This position is available now. The successful applicant should be familiar with gene cloning, DNA sequencing and plasmid manipulation. Send your curriculum vitae and two letters of recommendation to:

Dr. Young S. Chung
Département de Sciences biologiques
Université de Montréal, C.P. 6128 "A"
Montréal, Québec, Canada H3C 3J7

POSTDOCTORAL POSITION AT MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Biochemist for research relating to activity determinations of individual enzyme molecules and of individual microorganisms. This multidisciplinary project involves the use of biochemical assays within microdroplets in combination with flow cytometry/cell sorting. Candidates should send their résumé and three references to:

Dr. James C. Weaver
Room 20A-128
Massachusetts Institute of Technology
Cambridge, Mass. 02139

The position is available immediately.
An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available immediately to study energetics, phospholipid metabolism, and/or membrane transport in erythrocytes and myocytes. Recent Ph.D. in physiology or pharmacology desirable. Send curriculum vitae and names of three references to: **Dr. H. D. Kim, Department of Pharmacology, University of Missouri, School of Medicine, Columbia, Mo. 65212.**

POSTDOCTORAL POSITION available September 1984. Preference given to recent graduate in molecular biology, protein biochemistry, or biophysics with interest in the functional aspect of protein methylation. Send curriculum vitae to: **Dr. Woon Ki Paik, Fels Research Institute, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

Opening in the research laboratories of the Division of Hematology and Oncology, Children's Hospital, Harvard Medical School, for a Ph.D. to study the biochemistry and cellular biology of red blood cell differentiation. Current areas of research include the structural and functional analysis of hormone-receptor interaction, identification of cell lineage specific antigens, development of monoclonal antibodies and radioimmunoassays, protein purification, and analysis of globin gene expression.

Send résumé and three references to: **Dr. Arthur J. Sytkowski, The Children's Hospital, 300 Longwood Avenue, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer, M/F.**

POSTDOCTORAL POSITION in gene expression of glutathione S-transferases available 1 November 1984 for individual with background in molecular cloning and/or DNA enzymology. Salary negotiable. Send curriculum vitae and two letters of recommendation by 1 October 1984 to: **Dr. C.-P. David Tu, Biochemistry Program, The Pennsylvania State University, Althouse Laboratory, University Park, Pa. 16802.**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE Biochemistry/Molecular Biology

To study the molecular basis of enzyme regulation. Involves the creation and analysis of mutant versions of *Escherichia coli*. Aspartate transcarbamylase by in vitro methods. Requires Ph.D. in biochemistry or molecular biology and experience in some of the following areas: Site-direct mutagenesis, DNA sequencing and synthesis, enzyme purification and kinetics. Experience with HPLC useful. Send résumé and the names of three references to: **Dr. Evan R. Kantrowitz, Department of Chemistry, Boston College, Chestnut Hill, Mass. 02167. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the structure and expression of oncodevelopmental genes in rat liver and hepatomas. Studies include gene cloning, in vitro transcription, DNA sequencing, and chromatin structure of particular genes (that is, AFP, oncogenes, and so forth). Experience in molecular biology would be helpful. Send curriculum vitae with names of three references to: **Dr. Jen-Fu Chiu, Department of Biochemistry, University of Vermont College of Medicine, Burlington, Vermont 05405. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN FISHERIES OR BIOLOGICAL OCEANOGRAPHY

Available for research (observational, laboratory, or modelling) on the effects of climate and oceanographic processes on fisheries in collaboration with CIMAS Fellows and the facilities of the Rosenstiel School of Marine and Atmospheric Science and NOAA's Southeast Fisheries Center. One-year appointment extendable to 2 years. Salary to \$27,300 based on experience. Applicants should submit (i) a résumé, (ii) a specific statement of research interest, and (iii) the names of three references to:

Dr. William W. Fox, Jr., Professor and Director
Cooperative Institute for
Marine and Atmospheric Studies
RSMAS/University of Miami
4600 Rickenbacker Causeway
Miami, Fla. 33149
Telephone: 305-361-4185

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available to study behavioral and biochemical mutants in *Drosophila*. Project negotiable; present emphasis is on mutants with defects in associative learning and cyclic AMP metabolism. Send responses to: **Margaret Livingstone, Department of Neurobiology, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.**

POSTDOCTORAL POSITION available for two or more years for research on genetic regulatory mechanisms in the alpha-amylase system of *Drosophila melanogaster* with emphasis on the molecular cloning and characterization of a *trans*-acting regulator. Experience in recombinant DNA technology required. Send résumé and three reference letters to: **Dr. W. W. Doane, Department of Zoology, Arizona State University, Tempe, Arizona 85287.**

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POSTDOCTORAL RESEARCH ASSOCIATE position for study of the cell biology of the motility-related cell adhesion. Experience in hybridoma for cell adhesion molecules, membrane protein chemistry, and immunoelectron microscopy is desirable. Requires at least 2 years of postdoctoral experience in related research. Annual salary: \$18,000. Send curriculum vitae and three letters of recommendation before 1 September to: **Dr. Wen-Tien Chen, Department of Anatomy, Georgetown University Medical Center, Washington, D.C. 20007. Georgetown University is an Affirmative Action/Equal Opportunity Employer.**

MOLECULAR CONTROL OF CELL PROLIFERATION

POSTDOCTORAL RESEARCH POSITION(S) available immediately to study the regulation of gene expression during mitogenic activation of animal cells. Genes currently under study include those for ornithine decarboxylase, *c-myc*, S-adenosylmethionine decarboxylase, and cytoskeletal proteins. Background in molecular biology, especially in research with RNA, would be desirable. Send curriculum vitae and names of three references to: **Dr. David R. Morris, Department of Biochemistry, SJ-70, University of Washington, Seattle, Wash. 98195. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE POSITIONS AVAILABLE coordinating all clinical research studies in diabetes, preparing statistical analyses of all data, and preparing material on results for scientific papers. Requires B.S. or equivalent, minimum of 5 years of experience as laboratory director, and experience with insulin and glucose clamp studies in human subjects, with isotopic dilution studies, with radioimmunoassays and high-performance liquid chromatography, and a thorough understanding of biomedical statistics. Salary: \$20,000 to \$25,000. Send résumé and three letters of reference to: **Diabetes Unit (D-1), Department of Medicine, University of Miami School of Medicine, P.O. Box 016760, Miami, Fla. 33101. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available 15 September 1984 to study mechanisms of activation, transport, and regulation of activities of nerve growth factor. The methodology to be used includes radioimmunoassay, equilibrium binding studies, receptor isolation, protein purification, and tissue culture. Send curriculum vitae and names of references immediately to: **Dr. Peter H. Koo, Associate Professor, Program in Microbiology/Immunology, Office of the Provost and Dean, Northeastern Ohio Universities College of Medicine, Box 95, Rootstown, Ohio 44272. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE—Position available 1 January 1985 to Ph.D. in biochemistry. Study will involve the cloning of growth factor receptor. Candidates with a strong background in molecular biology or protein chemistry are preferred. Send curriculum vitae to: **Dr. Keiichi Itakura, Director, Department of Molecular Genetics, Beckman Research Institute of the City of Hope, 1450 East Duarte Road, Duarte, Calif. 91010. Please include a list of at least two references.**

POSTDOCTORAL RESEARCH POSITIONS: Associate positions are available to work on studies concerning the effects of retroviral- and tumor-associated proteins on immune function. Candidates should have a strong background in immunology, cellular or molecular biology, or biochemistry. Send résumé and three letters of reference to:

Dr. George J. Cianciolo and
Dr. Ralph Snyderman
Box 3892, Department of Medicine
Duke University Medical Center
Durham, N.C. 27710

The University of Louisville School of Medicine is searching for a **PROFESSOR AND CHAIRMAN** for its Department of Biochemistry. Requirements include a doctorate (or an equivalent degree) in biochemistry or a related area, as well as scientific leadership, administrative ability, continuous grant support, and excellence in teaching. Interested individuals should submit a curriculum vitae to: **Joseph C. Allegra, M.D., Professor and Chairman, Department of Medicine, University of Louisville, Louisville, Kentucky 40292.** The deadline for submission of materials is 31 October 1984. *An Affirmative Action/Equal Opportunity Employer.*

RESEARCH ANIMAL SCIENTIST or RESEARCH PHYSIOLOGIST (ANIMAL), at GS-11 (\$25,489), GS-12 (\$30,549), or GS-13 (\$36,327), grade based on qualifications. One federal career civil service position with United States Department of Agriculture (USDA)—Agricultural Research Service (ARS) in El Reno, Oklahoma, to conduct research to characterize the physiological controls which regulate (i) gastrointestinal motility, (ii) nutrient absorption, and (iii) nutrient partitioning utilizing the bovine and opine as experimental units. Ph.D. or equivalent education/experience is required with strong knowledge of mammalian physiology and endocrinology. Candidate must be United States citizen. *Equal Opportunity Employer.* For application procedures, contact: **L. G. Burkes, SR-101-84, USDA-ARS-PD-POB; Southern Region Section; Building 417, BARC-East; Beltsville, Md. 20705. Telephone: 301-344-1508.**

RESEARCH ASSOCIATE OR POSTDOCTORAL POSITION—BIOCHEMICAL PHARMACOLOGY. Position available immediately, mechanism and metabolism studies of nucleoside-phospholipid conjugates and the related anticancer agents. Applicants should have Ph.D. in biochemistry or pharmacology with background in nucleoside, nucleotide, and phospholipid biochemistry desired. Salary range \$16,000 to \$22,000 per year for up to 2 years. Send curriculum vitae and two references to: **Dr. Chung I. Hong, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, N.Y. 14263. An Equal Opportunity Employer.**

RESEARCH BIOCHEMIST

Postdoctoral research fellow sought to participate in ongoing research projects of the pulmonary section including studies of complement biochemistry, connective tissue biochemistry, and biochemistry of pulmonary epithelial cells. Experience in HPLC is necessary. Experience with protein biochemistry is desirable. Interested applicants should contact: **Dr. Stephen I. Rennard, M.D., Chief, Pulmonary Section, Department of Internal Medicine, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebr. 68105. The University of Nebraska is an Affirmative Action/Equal Opportunity Employer.**

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The State University of New York at Stony Brook invites nominations and applications for the position of Director of Corporate and Industrial Research Development. The incumbent will report to the Vice Provost for Research and Graduate Studies. He/She will represent the range of Stony Brook's research activities to industry, business, and foundations, and foster collaborative interaction between the university, particularly Stony Brook's Center for Biotechnology, and major firms and small businesses in biotechnology.

The Director will have primary responsibility for enhancing industry's awareness and support of Stony Brook's scientific, technical, and biomedical research and graduate programs, and to develop mechanisms to promote formal cooperative relationships between the university and appropriate businesses and industries.

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Dr. Francis Johnson, Chair, Search Committee for Director of Corporate and Industrial Research Development, Department of Pharmacology, SUNY Stony Brook, Stony Brook, NY 11794.

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You must have an MS in Allied Health Science and 6 years' industrial experience related to product safety/toxicology, ideally in the petroleum/petrochemical industry. A PhD and 3 years' career experience is preferred.

PRODUCT SAFETY SPECIALIST — You will prepare Health and Safety Data Sheets and other hazard communication material for products used or produced by the company. You will also assure that products meet safety and regulation requirements, recommend precautionary labeling language, safe packaging, use, handling and disposal.

You should have an MS in Toxicology or closely Allied Health Science degree, plus 4 years' industrial experience in

Toxicology or Product Safety, preferably in petroleum or petrochemicals. You must also have a strong working knowledge of all applicable laws (TSCA, FIFRA, FD&C Act, EEC 6th Amendment), regulations (DOT, OSHA) and standards (ANSI, OSHA).

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POSITIONS OPEN

PROCESS BIOCHEMIST

International Minerals & Chemical Corporation, a leading supplier to agricultural, industrial, and chemical markets worldwide is presently seeking an individual with experience in protein chemistry, protein biochemistry, and/or physical biochemistry to work in the area of protein purification and protein renaturation.

Requirements for this position include a Ph.D. in either biochemistry or biochemical engineering. Candidates with degree in related disciplines will also be considered. Postdoctoral research and/or industrial experience is desirable.

This individual will be responsible for developing methodology for large-scale purification of proteins isolated from tissues and microorganisms. Work requires innovative approaches to solving problems associated with protein separations. Comprehensive knowledge of protein characterization and practical application will be beneficial. Good oral and written communication skills required.

Salary will be commensurate with experience and includes a complete fringe benefit package including relocation expenses. For confidential consideration forward your résumé to:

M. G. Ray
International Minerals &
Chemical Corporation
P.O. Box 207
Terre Haute, Indiana 47808

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RESEARCH ASSISTANT

Postdoctoral positions available immediately to study (i) protein and lipid kinases and phosphorylation in tumor lines whose growths and morphology are modulated by cyclic AMP, and (ii) oncogene expression in cyclic AMP responsive cancer cells. A Ph.D. with experience in either biochemistry, chemistry and cell biology, or recombinant DNA technology and cell culture is necessary. Send curriculum vitae and three letters of reference to: **Brenda Stewart, Administrative Assistant, Korman Research Pavilion, ALBERT EINSTEIN MEDICAL CENTER, NORTHERN DIVISION, York and Tabor Roads, Philadelphia, Pa. 19141. An Equal Opportunity Employer.**

RESEARCH ENTOMOLOGIST at GS-11 (\$25,489) or GS-12 (\$30,549), grade based on qualifications. One federal career civil service position with United States Department of Agriculture (USDA)—Agricultural Research Service (ARS), Screwworm Research, in Tuxtla Gutierrez, Chiapas, Mexico, to conduct basic research on the physiology and nutrition of screwworm larvae and adults. Research objectives include determination of the effect of nutrition and mass-rearing on the basic physiology and biological activity of screwworm eradication program. Strong background in insect physiology and nutrition preferred. Ph.D. or equivalent education/experience required. Applicants must have some knowledge of Spanish language. Candidate must be U.S. citizen. *Equal Opportunity Employer.* For application procedures, contact: **L. G. Burkes, SR-103-84; USDA-ARS-PD-POB; Southern Region Section; Buiding 417, BARC-East; Beltsville, Md. 20705. Telephone: 301-344-1508.**

RESEARCH MICROBIOLOGIST with the United States Department of Agriculture (USDA), Agricultural Research Service (ARS). Position located at Roman L. Hruska Meat Animal Research Center, Clay Center, Nebraska. Incumbent will conduct independent research program in gastrointestinal tract-plant ingesta interactions in the areas of anaerobic microbiology and forage utilization. Career Federal Service. GS-11/12/13 (\$25,489 to \$47,226)—salary based on qualifications and experience. *An Equal Opportunity Employer.* Candidates must be United States citizens. For applications contact: **Dr. Wilson Pond, USDA-ARS-B94, Meat Animal Research Center, Box 166, Clay Center, Nebr. 68933; telephone: 402-762-3241.**

POSITIONS OPEN

RESEARCH ASSOCIATE

Design and conduct experiments relevant to structure and function relationships in muscarinic receptors and their associated cyclic AMP-dependent protein kinases. Search scientific literature; propose hypotheses that are testable by experimentation. Experimental protocols include organic synthesis and analysis absorbance, fluorescence spectroscopy, scintillation counting, infrared spectroscopy, nuclear magnetic resonance, high-performance liquid chromatography, gel filtration, ion exchange, and affinity chromatography, electrophoresis. Must have a Ph.D. in organic biological chemistry and 5 years of experience as research chemist and biochemist. Background in use of limited proteolysis to study protein structure and function and in NMR and IR spectroscopy. Forty hours per week; \$22,000 per year. Apply at: **The Louisiana Office of Employment Security, 617 Saint Charles Avenue, New Orleans, La. 70130. Refer to: Job Order Number 416655.**

RESEARCH BIOCHEMIST

International Minerals & Chemical Corporation, a leading supplier to agricultural, industrial, and chemical markets worldwide is presently seeking a biochemist with a strong background in protein chemistry, additionally, experience in endocrinology and/or immunology is desired.

The successful candidate should have a Ph.D. with at least 2 years postdoctoral experience and a solid publication record. Good oral and written communication skills are necessary.

This individual will work with a group of scientists in our research facility located in Northbrook, Illinois, in the discovery and the development of polypeptide products for animal growth, health, and nutrition.

Salary will be commensurate with experience and includes a complete fringe benefit package including relocation expenses. For confidential consideration forward your résumé to:

M. G. Ray
International Minerals &
Chemical Corporation
P.O. Box 207
Terre Haute, Indiana 47808

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RESEARCH POSITION

Ph.D. or M.D. with research experience in cardiovascular physiology wanted to work in a research laboratory in a university-affiliated, suburban New York hospital. This is an opportunity for an independent and motivated scientist with good communication skills to work in conjunction with an active clinical cardiovascular team, to participate in ongoing research, and to initiate new avenues of investigation. The hospital, located on Long Island, houses extensive research facilities. A research building is under construction to provide support and core services as well as an interchange of ideas between investigators in different fields. The research laboratory is fully equipped and staffed. This is a stimulating work environment with an excellent and fully funded salary. The successful applicant will be expected to apply for grants. Experience beyond the doctoral level is required and a full benefits package is provided. A letter, including a summary of research goals, and a résumé should be submitted to: **Dr. Roy Nelson, Division of Cardiovascular Surgery, North Shore University Hospital, Manhasset, New York 11030.**

SUPERVISOR. Immunology Research Laboratory. Children's Memorial Hospital is currently seeking an experienced supervisor for our Immunology Research Laboratory. Ideal candidates will have a Ph.D. in immunology (cellular aspects preferred) or at least 5 years of on-the-job experience and a master's in immunology with specific work in mononuclear cell function and mediator analysis.

We offer excellent salaries and benefits. For consideration, send résumé including salary history to: **Personnel, The Children's Memorial Hospital, 2300 Children's Plaza, Chicago, Illinois 60614. Equal Opportunity Employer.**

POSITIONS OPEN

SENIOR RESEARCH ASSOCIATE. Applications are invited from individuals wishing to join a 3-year federally funded research project (beginning 7 September 1984) designed to analyze and simulate associative neuronal modifications in aplysia. Prior postdoctoral work and experience with intracellular recording techniques is necessary. Voltage clamp and computer simulation experience desirable. Salary is comparable with that of a starting assistant professor. Applicants should send curriculum vitae and names of three references to: **Dr. John Byrne, Department of Physiology and Cell Biology, University of Texas Medical School, Houston, Texas 77025. An Equal Opportunity Employer. Women and minorities are encouraged to apply.**

EXCHANGE PROGRAM

The Committee on Scholarly Communication with the People's Republic of China (CSCPRC) announces a **NATIONAL PROGRAM OF SCHOLARLY EXCHANGES** with the People's Republic of China. This program offers support for visits to China by scholars and advanced graduate students in the sciences, engineering, social sciences, and humanities. The Graduate and Research Programs support American scholarly interests by providing opportunities for study and research at Chinese universities and research institutes. The Visiting Scholar Exchange Program, which supports both Chinese and American scholars, is designed to enhance intellectual dialogue and make significant contributions to academic exchanges in a given discipline. Application is open to United States citizens and permanent residents regardless of national origin, sex, or religious affiliation. Funding is provided by the United States Information Agency, Department of Education, National Endowment for the Humanities, National Science Foundation, and the Starr and Ford Foundations. Address requests to: **CSCPRC, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.**

Postmark/mailling deadline for application to Graduate and Research Programs is 6 October 1984. Deadline for application to the Visiting Scholar Exchange Program is 29 October 1984.

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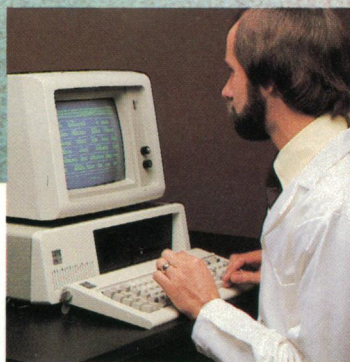
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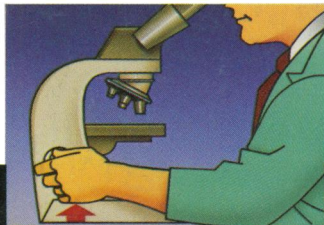
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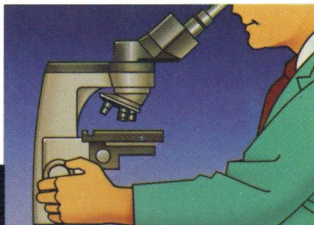
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