

cusing primarily on lethal mutations that define the maternal contribution to embryonic development, are concisely described for *Caenorhabditis* by Kempthorne and for *Drosophila* by Perrimon and Mahowald.

Four chapters convey the state of the art of genetic analysis in assorted vertebrates: fish, chickens, amphibians, and mice. The reader is presented not only with the problems inherent in carrying out the genetic analysis in these organisms but also with compelling reasons why one should try. In a delightfully clear chapter, McCormick and Alton discuss in simple and critical terms the significance of the mouse T/t complex. They conclude that this complex probably does not comprise a set of genes with related functions such as the *Antennapedia* and *Bithorax* complexes in *Drosophila* (described from anterior to posterior in the chapter by Mahaffey and Kaufman) but that it nonetheless offers excellent opportunities to study developmentally important genes in a mammal.

A third theme is how new molecular methods extend the power of genetics in any organism, as described in the four chapters on transgenesis in fruitflies, nematodes, plants, and mice. In addition, ways in which gene function can be studied without involving the isolation of mutants are also described. Jäckle *et al.* review studies in which antisense RNA is used to inactivate gene activity and hence to mimic mutant phenotypes. Flytzanis *et al.* discuss gene transfer experiments with sea urchin eggs that facilitate studies of the regulation of gene expression during development of this hitherto genetically unstudied organism.

Four chapters cover the theme of DNA rearrangements and transposable elements well, but the reasons for their inclusion are often left unclear. For example, Federoff provides a lucid account of transposable elements in maize, but it may not be obvious to the uninitiated that this chapter is included because mobile elements have played an important role in the development of molecular genetics and somatic mosaicism caused by transposition is an important method of establishing cell lineage relationships.

Overall, this volume leaves the reader with an appreciation for the wealth of developmental phenomena still to be understood, a feel for the current excitement in developmental genetics, and an optimistic view of the future based on new technologies. In addition, one glimpses the thought processes of some of the researchers in the field. The candid questions posed by the editor to the contributors provoke dialogue such as one hears spoken among developmental geneticists during reflective moments. Although this volume makes interesting reading for

the professional, it is neither comprehensive nor balanced and thus will not be useful as an introductory textbook. However, because it contains many excellent articles that provide lucid reviews of a variety of topics, it would serve well as a companion book for upper-division and graduate-level courses.

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Neural Differentiation

From Message to Mind. Directions in Developmental Neurobiology. STEPHEN S. EASTER, JR., KATE F. BARALD, and BRUCE M. CARLSON, Eds. Sinauer, Sunderland, MA, 1987. x, 368 pp., illus. \$55; paper, \$35. Based on a symposium, Ann Arbor, MI, June 1986.

To furnish even an outline of how molecular messages control the cellular differentiation that results in the thinking brain may be too much to ask from any single book. This one offers instead a series of careful reviews by people engaged in investigating various aspects of this general question. Each contributor is a specialist in a system that is adding useful information about neural development at a particular level. There are six chapters at the molecular and molecular genetic level, ten that deal with cellular differentiation and cellular interactions, and four at the level of emerging mental properties. Together, they constitute a fragmentary tale made up of isolated pieces of one of the most challenging puzzles facing scientists today. Of the several collections of papers in developmental neurobiology published during the last ten or so years, this one—because of the broad focus and the generally high quality of the reviews—may be the best.

Most of the reviews have general appeal, but some seem too focused on the contributors' own work to be of interest to nonspecialists. The introductions at the beginning of each section of the book help to put these reviews into broader context. In his chapter on the sexual differentiation of the brain, Roger Gorski describes how steroid hormones, notably estrogen, influence the development of a sexually dimorphic nucleus (SDN) in the hypothalamus. Estrogen, as a metabolite of testosterone, masculinizes the SDN. Gorski points out that the whole mammalian brain is "inherently female." He takes us through experiments that show how estrogen enlarges the SDN in males, possibly by promoting the survival of its developing neurons. Could it then be that the inherently female SDN is sculpted out of

a set of neurons ready, given the signal, to become the male nucleus? A single injection of testosterone given shortly after birth can permanently modify the brain structure of a genetic female and her adult sexual behavior. Gorski makes it clear that for other dimorphic nuclei the hormones involved and their modes of action may be quite different.

Lynn Landmesser, in her excellent chapter on the formation of motor connections in the chick embryo, does not ask how the different pools of motor neurons acquire their individuality, but she shows that presumable differences in their membrane proteins lead the growing axons of these neurons to react selectively to the extracellular terrain through which they navigate the route to their target muscles. The review by Harrelson *et al.* offers a glimpse of a class of membrane-associated glycoproteins which in insects appear to be involved in pathfinding and in vertebrates may be central to target finding by axons, though it is not yet known if homologous proteins even exist in vertebrates.

To become individualized and express the membrane proteins that will ultimately regulate connections, a neuron must turn on a specific set of genes. Two chapters, one by McKinnon *et al.* and one by Chikaraishi, expertly discuss approaches to neural differentiation by studying populations of brain-specific messenger RNAs. At this level of analysis, the results are extremely sketchy and mechanistically disappointing but nevertheless intriguing. Are there special "identifier sequences" that tag genes to be turned on in neural tissues? Are there RNA messengers without polyadenylate in the brain, and if so what are their roles? Time will judge the ultimate significance of these unexpected molecular findings.

I have worked backward from sexual behavior to RNA molecules. The book goes forward and points to future research into the link between message and mind.

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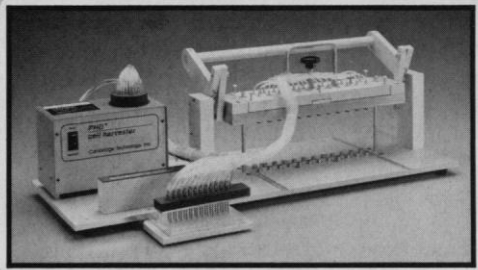
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Edited by Jeylan T. Mortimer, *University of Minnesota*, and Kathryn M. Borman, *University of Cincinnati*

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\$29.95; AAAS members \$23.96 (include membership number from *Science*). 306 pp., 1987. AAAS Selected Symposium 107.

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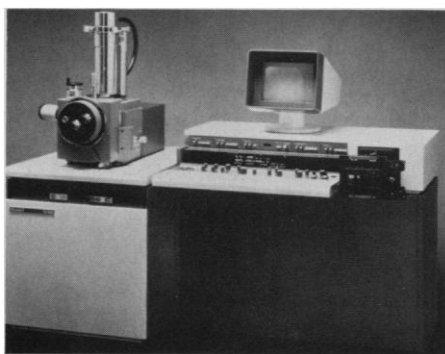
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Behavioral Research Software

THE OBSERVER is a software package that creates the software necessary to permit a portable computer to act as an event recorder. The program itself operates on a full-size personal computer. The user tells the program the type of experiment or observation planned and what events should be recorded; THE OBSERVER writes an event-recorder program and transfers it to the portable computer. The portable computer then can be taken into the field for data collection. The program allows 60 keys to be defined as events, and the portable computer can ask as many as 20 questions and store the answers with the rest of the data. THE OBSERVER can also retrieve the data files from the portable computer, calculate statistics, and produce reports and tables that can also be read by other statistical programs. THE OBSERVER requires an IBM PC or completely compatible computer with at least 256 kilobytes of random-access memory, an RS-232 port accessible as COM1, and MS- or PC-DOS 2.1 or later, as well as a TRS-80 model 100 portable computer. L. P. J. J. Noldus (The Netherlands). Circle 560.

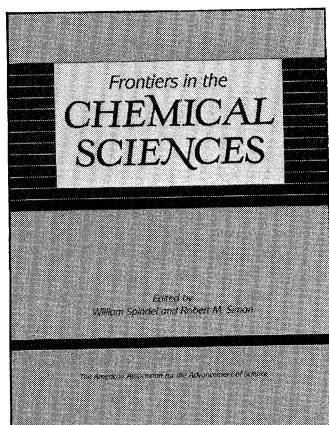
Literature

1988 Product Guide is a catalog of immunological reagents. Serotec (England). Circle 550.

The *Integrating Sphere Instrumentation* catalog features integrating sphere photometers, reflectometers, power meters, and uniform light sources. Labsphere. Circle 551.

Chemalog Stable Isotopes is a brochure about deuterated compounds nuclear magnetic resonance solvents, and ^{13}C -labeled compounds. Chemical Dynamics. Circle 553.

The *Short Form Catalog* features gas-filled radiation detectors, including Geiger-Müller tubes and probes, proportional counters, fission chambers, gamma ionization chambers, and reactor control chambers. TGM Detectors. Circle 570.



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SCIENCE
1333 H Street, NW
Washington, DC 20005

POSITIONS WANTED

Biochemistry, M.S. Protein purification, fluorescence techniques, HPLC, lab management, teaching. Mid-South, industrial preferred. Box 51, **SCIENCE**.

Biochemistry Technologist, B.S., Research Associate, 1981. Seventeen years of experience (research, industry) in a variety of biochemical, enzymatic, ELISA immunological assays, which involved using radioisotopic techniques, paper chromatography, measure enzyme activities, various colorimetric techniques for locating, quantitating proteins and carbohydrates. Purification and characterization of protein, enzymes. Experienced with gel filtration, ion-exchange, affinity chromatography, gel electrophoresis and isoelectric focusing. Also recombinant membrane, membrane preparation, bacteria culture. Excellent skills. Seeks research/academic/industrial or medical laboratory speaking English in Canada. Box 38, **SCIENCE**.

POSITIONS WANTED

Biomedical Research Zealot. Ph.D.—candidate—turned Pre-Med seeks well-established investigator in clinical setting with challenging research project requiring experienced, independent researcher who knows what hard work is. Strong physiology background. Diverse lab skills. Animal surgery/behavioral monitoring experience. Enjoy teaching and close patient interaction. Academic or industrial position. Available May 1988. Box 55, **SCIENCE**.

Foreign Biochemist. Twenty-two years of clinical and basic biochemistry—experienced visiting associate professor, various skilled advanced laboratory techniques. Publications in biochemistry, clinical chemistry, lipids, lipoproteins. 1519 1/2 Blair Avenue, St. Paul, MN 55104.

Molecular Biologist/Biochemist, Ph.D. Publications include eukaryotic expression vectors, protein purification and enzymology. MBA candidate with strong communication/interpersonal skills, years of industrial R&D experience, seeks management position. Box 52, **SCIENCE**.

Ph.D. in Nutrition (1986). Two years of postdoctoral experience. Research experience in molecular biology, enzymology and protein purification. Seeking academic or industry research opportunities. Box 54, **SCIENCE**.

Ph.D. Protein Chemistry 1987. Purification (PAGE, chromatography, electrophoresis, assay development) and characterization of bacterial proteases and connective tissue proteins. Prior academic/industrial experience, mechanically inclined, excellent problem-solving skills, inventive. Desires industrial position (nationwide) or postdoctoral appointment (Philadelphia area)/ Box 53, **SCIENCE**.

Physiologist, M.D. Research experience in nephropathology (hemodynamics, endocrinology). Clinical experience in general internal medicine. Teaching experience in medical physiology. Box 31, **SCIENCE**.

POSITIONS OPEN

ACADEMIC POSITION

The University of California, Davis, School of Medicine is recruiting for a full-time faculty member to be jointly appointed 50% in the Department of Pharmacology and 50% in the Department of Internal Medicine/Cardiology. Appointment will be at the assistant or associate professor level commensurate with qualifications and experience. Candidates must have a Ph.D. or M.D. or M.D./Ph.D. M.D. applicants must be Board-certified in internal medicine in at least one of the following areas: central neural control mechanisms, neurophysiology, neuropharmacology or neuroanatomy with reference to autonomic control mechanisms regulating the cardiovascular system. Responsibilities will include teaching, research and, if applicable, clinical rotations in cardiology.

Please submit a letter outlining research and teaching background, and identifying current research interests along with curriculum vitae and the names of three references to: **Larry G. Stark, Ph.D., Professor and Chairman, Department of Pharmacology, School of Medicine, University of California, Davis, CA 95616.**

Applications will not be accepted after 31 August 1988. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR: BIOCHEMISTRY/MOLECULAR BIOLOGY

Tenure-track position anticipated to open during 1988 academic year. Candidates should have doctoral degree in biochemistry or related area, and significant postdoctoral training. Preference will be given to candidates with experience in the molecular aspects of protein and/or DNA structure and function, including regulatory mechanisms. Appointees will be expected to develop strong, independent research program and to participate in training of doctoral and/or health science students. Please send curriculum vitae, bibliography, summary of research goals, and names of three references to: **Ronald A. MacQuarrie, Head, Division of Molecular Biology and Biochemistry, School of Basic Life Sciences, University of Missouri—Kansas City, Kansas City, MO 64110.**

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

POSITIONS OPEN

ANIMAL PHYSIOLOGIST, Ph.D. required by 15 September 1988. Temporary 9-month position starts 15 September 1988 to teach animal physiology, human anatomy and physiology, and topics in biological thought on small liberal arts campus. Send résumé, transcripts, and three letters of reference by 30 April 1988 to: **Dr. Tom Straw, Division of Science/Mathematics, University of Minnesota, Morris, MN 56267.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

Pulmonary Division, University of Pittsburgh School of Medicine. Tenure/nontenure-track position at the **ASSISTANT PROFESSOR** level available for Ph.D. with a strong background in cellular physiology and biochemistry. The candidate would be expected to pursue an independent research program, as well as collaborate with M.D.'s interested in the role of soluble mediators of inflammation elaborated by neutrophils, macrophages and lymphocytes in a variety of parenchymal lung diseases. Experience in tissue culture, ultrastructure, and lipid and protein identification/purification is desired. Applicants should submit curriculum vitae, a statement of research interests, and three letters of reference to: **James Dauber, M.D., Pulmonary Medicine, 440 Scaife Hall, Pittsburgh, PA 15261.**

An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR (tenure-track). The Department of Psychiatry, University of Pittsburgh School of Medicine seeks a candidate at the assistant professor level to develop a program of research in primate neuroendocrinology and sleep. Candidates should have a recent Ph.D. (or M.D.) with training in neuroendocrinology or a related field, and research experience involving primates. He/she should have a minimum of 2 years of postdoctoral experience, and a demonstrated record of scientific accomplishments. The successful applicant will develop his/her own research program in the Division of Child Psychiatry, collaborate with other faculty members on work relating to the control of growth hormone secretion during development in primates, and participate in teaching activities of the division and department. The Department of Psychiatry has a strong commitment to basic research in brain function and mental disease. University faculty currently conducting research in primates utilize a large primate facility operated by the University of Pittsburgh. Salary, space, and start-up funds are negotiable. Send curriculum vitae and three letters of recommendation to: **Professor J. Puig-Antich, Department of Psychiatry, University of Pittsburgh, Room E719, Western Psychiatric Institute and Clinic, 3811 O'Hara Street, Pittsburgh, PA 15213.**

An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

Applications are invited for a tenure-track position at the assistant professor level. Applicants should have 2 or more years of postdoctoral experience, and should have the potential for establishing an independent laboratory in a modern area of biochemistry and molecular biology. Interest and excellence in teaching and research are expected. The Medical Center includes the Schools of Dentistry, Medicine, Nursing, and Graduate Studies. The present Department consists of 14 faculty with \$1.5 million in annual research grant support. Interested individuals should send curriculum vitae with bibliography, short (three-page) summary of planned research, and the names and addresses of three references to the following: **Dr. Robert Roskoski, Jr., Head, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, 1100 Florida Avenue, New Orleans, LA 70119-2799.** *Equal Employment Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR IN NEUROSCIENCE—The Department of Neuroscience of The Johns Hopkins University invites applications for an assistant professorship with interest in somatic sensory neurophysiology. Applicants should send curriculum vitae and the names of three references to: **Director, Bard Laboratories, Department of Neuroscience, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205.** *Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR

Applications are invited for a full-time tenure-track position in the Department of Physiology and Endocrinology. Potential to interact with ongoing programs within the Department on cellular aspects of cardiovascular and muscle physiology is preferred. The applicant should be capable of participating in teaching medical physiology, developing graduate level courses, and a strong research program. Salary commensurate with experience. Submit curriculum vitae, three recent papers, and the names of three references to: **Dr. Keith Green, Chairman, Physiology and Endocrinology Faculty Search Committee, Department of Ophthalmology, Medical College of Georgia, Augusta, GA 30912. Equal Opportunity Employer/Affirmative Action Program.**

ASSISTANT PROFESSOR OF BIOCHEMISTRY, tenure-track position. Research and teaching interests in the areas of protein structure and biophysical chemistry. Ph.D. in biochemistry or chemistry and 2 years of postdoctoral experience. Ability to teach biophysical chemistry and to communicate clearly both orally and written. Research competence in membrane protein biochemistry preferred but not essential. Send curriculum vitae, transcripts, reprints of publications, and names of three references to: **Dr. S. Derek Killilea, Chair, Search Committee, Biochemistry Department, North Dakota State University, Fargo, ND 58105** by 20 May 1988. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT RESEARCH NEUROLOGIST. Ideal candidate will hold an M.D. or M.D./Ph.D. in neuroscience and an M.S. or equal in electrical engineering; will have a strong computer programming background, especially in C and FORTRAN languages using VMS and UNIX systems on a VAX-based graphics workstation, and with programming ability to integrate digitized MRI, DSA, CT and PET images with a computerized neurosurgical stereotactic system. Starting salary \$36,600. Send curriculum vitae to: **Professor Jerome Engel Jr., University of California, Los Angeles Medical School, Los Angeles, CA 90024.**

ASSISTANT OR ASSOCIATE PROFESSOR IN PHARMACOLOGY. Medical school, full-time faculty to participate in the pharmacology course for sophomore medical students and advanced courses for graduate students. An active research program with emphasis in molecular biology is highly desired, other areas of expertise will also be considered. Rank and salary negotiable depending on qualifications and experience. Starting date: 1 August 1988. Send curriculum vitae and three letters of recommendation to: **Dr. P. G. Iatridis, Northwest Center for Medical Education, 3400 Broadway, Gary, IN 46408. Indiana University is an Equal Opportunity/Affirmative Action Employer.**

ASSOCIATE IN PAIN MANAGEMENT, OREGON HEALTH SCIENCES UNIVERSITY SCHOOL OF MEDICINE

The Department of Anesthesiology at the Oregon Health Sciences University School of Medicine is recruiting for a full-time faculty member at the assistant professor level. The successful recruit will have an academic appointment in the School of Medicine, and will have teaching and research responsibilities in the Pain Management Center of our University Hospital. Candidates should have specific training (at least 3 months) in pain management and related research and should have experience in a multidisciplinary pain management center. Candidates should have an aptitude for research, demonstrated by primary authorship of peer-reviewed publications in the field of pain management and/or regional anesthesia. Ability to interact with basic and clinical scientists should be shown. Candidates should be certified by the American Board of Anesthesiology and have an Oregon medical license. Salary will be \$34,000 base per year, with overage from practice plan earnings. Interested candidates should send their curriculum vitae and the names of three references to: **Wendell C. Stevens, M.D., Professor and Chairman, Department of Anesthesiology, Oregon Health Sciences University, Portland, OR 97201.**

POSITIONS OPEN

ASSISTANT PROFESSOR, VIROLOGIST—tenure-track position to begin fall 1988. Ph.D. in virology or related area, and postdoctoral experience required. Teaching responsibilities include undergraduate courses in Public Health/Pathogenic Microbiology and Virology. The successful candidate is expected to develop vigorous externally funded research program and to direct M.S. and Ph.D. students. Experience in marine or water virology research preferred; however, all applicants with virological expertise will be considered. Send curriculum vitae, statement of research interests, and names and addresses of at least three references to: **Dr. Frank G. Rodgers, Department of Microbiology, University of New Hampshire, Durham, NH 03824-3544.** Non-citizens must include current visa status. Applicant screening will begin 1 May 1988 and continue until position is filled. *UNH is an Affirmative Action/Equal Employment Opportunity.*

ASSISTANT TO FULL PROFESSOR

The Department of Pharmacology at Case Western Reserve University has positions available for two faculty members at either the junior or senior level. Candidates must have outstanding research credentials in defining actions of chemical agents at the molecular level. Research areas involving molecular endocrinology, molecular genetics, drug metabolism, and/or cellular signaling by growth factors, neurotransmitters or second messengers are of particular interest. Application letters together with curriculum vitae, statement of research interests, and the names of three referees should be sent to: **Dr. Leslie T. Webster, Jr., Department of Pharmacology, School of Medicine, Case Western Reserve University, Cleveland, OH 44106. Telephone: 216-368-3394. An Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.**

ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF PHYSIOLOGY SCHOOL OF MEDICINE MEHARRY MEDICAL COLLEGE

Applications are invited for a 12-month tenure-track position. The successful candidate will share responsibility for the teaching of cardiovascular physiology to medical and dental students. Candidates must have a relevant Ph.D. degree (or equivalent), with postdoctoral experience, the potential for developing a vigorous, funded, and productive research program. Applicants should send curriculum vitae, description of research interest, and the names and addresses of three references to: **Dr. James G. Townsel, Ph.D., Professor and Chairman, Department of Physiology, Meharry Medical College, 1005 D.B. Todd Boulevard, Nashville, TN 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.**

BIOCHEMICAL TOXICOLOGIST. Postdoctoral fellow or research associate to conduct research in the mechanisms of bioactivation of pneumotoxins. Requires Ph.D. in toxicology, biochemistry, or related area. Experience in cytochrome P-450 isolations, lung cell manipulations, or metabolism of xenobiotics is desired. Starting 1 May 1988 or after with salary \$21,000 to \$30,000. Send curriculum vitae and three letters of recommendation to: **Dr. Garold S. Yost, Department of Pharmacology and Toxicology, 113 Skaggs Hall, University of Utah, Salt Lake City, UT 84112. An Equal Opportunity/Affirmative Action Employer.**

CELL BIOLOGIST/POSTDOCTORAL FELLOW: A position is available immediately to work with CNS regeneration in a multidisciplinary, well-integrated team with a special interest in spinal cord, but a broad CNS program. The research utilizes a thin implanted chamber which resembles tissue culture, and involves transplantation, growth factors, vascular studies, fluorescent microscopy and histochemistry, as well as some electrophysiology. Microsurgery skills are important. This is a 2-year position with a competitive salary based on credentials. Excellent opportunities for longer term advancement. Please apply to: **Walter Levy, M.D., Department of Neurosurgery, University of Miami School of Medicine, 1600 N.W. 10th Avenue (R48), Miami, FL 33136.**

POSITIONS OPEN

COLBY COLLEGE, BOTANIST DEPARTMENT OF BIOLOGY

Responsibilities: Teaching the botany section of the department's first semester course, introductory biology: preparation and delivery of lectures on plant structure, function, and diversity; teaching two sections of laboratory in the course; and evaluation of students' work on written examinations and on laboratory papers.

Qualifications: Ph.D. or master's degree in biology, botany, or a related discipline is desirable, but senior graduate students with demonstrated teaching abilities and a desire to teach at an excellent undergraduate college will be considered. Salary is dependent on qualifications and experience.

Time: Half-time during the fall semester 1988 to 1989, late August through December 1988. Applicants should submit by 6 May 1988 a résumé, transcripts of undergraduate and graduate study, and three letters of recommendation to: **Professor Arthur K. Champlin, Chair, Department of Biology, Colby College, Waterville, ME 04901. Colby College is an Affirmative Action/Equal Opportunity Employer and encourages applications from minorities and women.**

CELLULAR/MOLECULAR BIOLOGIST (Growth and Lactation). The Department of Animal Science, University of California, Davis, invites applications for a tenure-track 11-month position at the rank of assistant professor with teaching and research responsibilities. Applicant should have a Ph.D. in biochemistry, molecular biology, cell physiology or closely related fields. Teaching responsibilities include a graduate course in regulatory cellular mechanisms of animal growth and lactation, contribution to undergraduate courses in animal science, and advising undergraduate and graduate students. Research program is to focus on regulatory and metabolic mechanisms of animal growth and lactation in food producing animals at the cellular and molecular levels. Campus offers excellent opportunities for interdisciplinary collaboration and work with the livestock industry. Applicants should submit a letter of application, curriculum vitae, list of publications, transcripts, and names and addresses of three referees to: **Serge I. Doroshov, Search Committee, Department of Animal Science, Davis, CA 95616.** Applications must be received by 1 June 1988. The position is available 1 July 1988. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

THE CORTNER-COUCH CHAIR IN CANCER RESEARCH THE UNIVERSITY OF SOUTH FLORIDA

The University of South Florida College of Medicine seeks an established investigator for the newly established Cortner-Couch Endowed Chair in Cancer Research at the H. Lee Moffitt Cancer Center and Research Institute. Candidates must have a doctorate degree in an appropriate discipline, an active research program and a commitment to the integration of clinical activities with basic science research. Applications are encouraged from cancer scientists eligible for the rank of Professor at the University of South Florida College of Medicine. The Moffitt Cancer Center is a recently opened 162-bed free-standing cancer hospital and research facility on the campus of the University of South Florida. *The University of South Florida is an Affirmative Action/Equal Opportunity Institution.* Applicants may apply by sending curriculum vitae and description of research interests by 15 May 1988 to: **Richard C. Karl, M.D., Chairman, Search Committee, H. Lee Moffitt Cancer Center and Research Institute at The University of South Florida, P.O. Box 280179, Tampa, FL 33682.**

VETERINARY CLINICAL OR PUBLIC/ENVIRONMENTAL HEALTH EPIDEMIOLOGIST—Tenure-track position. D.V.M. and/or Ph.D., with advanced training in public or environmental health is essential. Experience in appropriate computer database management system desired. Salary commensurate with qualifications. Submit a letter of intent, curriculum vitae, and names of three references to: **J. F. Zachary, Veterinary Pathobiology Department, College of Veterinary Medicine, University of Illinois, 2001 South Lincoln Avenue, Urbana, IL 61801.** Application deadline is 1 June 1988 or until a suitable candidate is identified. Starting date is 1 July 1988 or soon thereafter. Telephone inquiries are encouraged at 217-333-2449. *The University of Illinois is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CORNEA RESEARCH

Search reopened. A joint appointment with the Department of Ophthalmology and Neurological Sciences Institute of Good Samaritan Hospital and Medical Center is available for a **SCIENTIST** with research interests in the cell biology, molecular biology, biochemistry, or immunology of the cornea. The successful candidate will be expected to establish a laboratory conducting independent basic research that complements current departmental clinical research interests in cornea. Postdoctoral research experience required. Level of appointment will depend upon research accomplishments. Please send inquiries and curriculum vitae with names of three references by 15 May 1988 to: **Michael W. Kaplan, Ph.D., Chairman, Cornea Search Committee, Neurological Sciences Institute, Good Samaritan Hospital and Medical Center, 1120 NW 20th Avenue, Portland, OR 97209-1595.**

An Equal Opportunity Employer.

CLINICAL VIROLOGIST—Manage the regulatory testing aspects of biologic products using viral assay techniques. Will be responsible for writing protocols, quality assurance, supervision of personnel and financial management of a fee-for-service lab of School of Veterinary Medicine. D.V.M., Ph.D., or M.S. degree with experience in clinical virology assay systems required. Experience growing and propagating adventitious viral agents, and regulatory protocols preferred. Please send résumé with salary requirements and three current letters of reference to: **Virginia Marcotte, Human Resources, Tufts University, 200 Harrison Avenue, Boston, MA 02111.** *An Affirmative Action/Equal Opportunity Employer.*

DIRECTOR OF INSTRUMENTATION—Purdue University, Department of Chemistry, seeks an individual to coordinate the development of state-of-the-art research and teaching instrumentation. Responsibilities include the management of a large group of instrumentation specialists and working with the faculty, staff, and students to see that their measurement needs are met. The group is involved with tasks ranging from design, construction, and testing of new equipment to maintenance of, and training on, existing, commercial instrumentation. Candidates must have a Ph.D. in chemistry and should have experience in digital and analog electronics preferably with a strong emphasis on system design. Prior supervisory experience is essential. A résumé and three letters of recommendation should be sent by 1 June 1988 to: **Professor Harry Morrison, Head, Department of Chemistry, Purdue University, West Lafayette, IN 47907.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

DIRECTOR DIVISION OF TOXICOLOGY DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

The Department of Pharmacology and Toxicology of the University of Arkansas for Medical Sciences is conducting a search to identify candidates for the position of Director of the Division of Toxicology. A successful candidate will have an earned doctoral degree with active research interests in pharmacology, toxicology, or occupational medicine.

The Director of the Division of Toxicology will be responsible for administering graduate programs in toxicology and industrial hygiene. Other educational responsibilities include continuing education in toxicology for health professionals.

The director is expected to have and maintain an active research program and should have demonstrated ability to compete successfully for research support.

The University of Arkansas is an Equal Opportunity Employer. Women and minority candidates are encouraged to apply.

Submit curriculum vitae, summary of research and administrative experience, and the names of at least three references to:

Dr. Donald R. Mattison
Department of Obstetrics and Gynecology
University of Arkansas for Medical Sciences
4301 West Markham, Slot 518
Little Rock, AR 72206

POSITIONS OPEN

DIRECTOR ENVIRONMENTAL MONITORING AND SUPPORT LABORATORY CINCINNATI, OHIO (EMSL-CIN) \$65,994 to \$71,910

U.S. Environmental Protection Agency is seeking highly qualified candidates for the position of Director, EMSL-CIN. The EMSL-CIN, a component of the Office of Research and Development, is responsible for the planning, management, development and implementation of multi-media (water, toxics, and hazardous wastes) research programs; the development of monitoring data and information processing and sophisticated instrumental analytical systems; the development and operation of national pollution monitoring quality assurance program for water and waste-water systems; the development of methods for the concentration, recovery and identification of chemical, physical, and biological pollutants in biotechnology research programs.

To qualify, applicants must have a bachelor's or higher degree in either biological or physical sciences or engineering that included training in organic or inorganic chemistry or chemical engineering and statistics and must meet the technical and executive qualifications described in the Vacancy Announcement. Call/write: **Edna Morse, EPA, SES and Executive Resources Unit, PM-224, 401 M Street, SW, Washington, DC 20460. Telephone: 202-382-3328,** for the Vacancy Announcement. Applications must be postmarked by 30 April 1988. *EPA is an Equal Employment Opportunity Employer.*

The University of Michigan Medical School invites applications for **DIRECTOR OF PROTEIN CHEMISTRY CORE LABORATORY** with a research-track faculty position. Candidates should have a Ph.D. in biochemistry or related field, with a strong chemical background, postdoctoral research training, and direct experience in protein purification, amino acid compositional analysis, and amino acid sequencing, including manual Edman techniques and use of automated sequencers. Rank and salary dependent upon experience. The duties of the Core Director will be to lead a team of three to four highly skilled technical assistants in the design and implementation of innovative techniques as well as in carrying out routine analyses related to protein purification, characterization, and amino acid sequence determinations. While the Core Director will have a major responsibility in carrying out and supervising service-related analyses in collaboration with research laboratories, a significant amount of time will be available to carry out his/her own or collaborative research. Please send résumé to: **Dr. M. J. Coon, Chairman, Department of Biological Chemistry, University of Michigan Medical School, Box 0606, Ann Arbor, MI 48109.** *A nondiscriminatory/Affirmative Action Employer.*

FACULTY POSITION CULLEN EYE INSTITUTE BAYLOR COLLEGE OF MEDICINE

Applications are invited for a faculty position in a major eye institute for a scientist with an interest in the mechanisms regulating tissue growth. Qualified applicants must have a Ph.D. or M.D. degree with strong postdoctoral experience in basic research. Successful applicant will be expected to establish a vigorous independent research program in one of the following areas: (i) intraocular vascular proliferation; (ii) pigment epithelial cell proliferation and migration; or (iii) trophic factors, which would complement other research programs in vision and ophthalmology already underway in the department. Possibilities for joint appointments in an appropriate basic science department or graduate program in the college are desirable and encouraged. Rank and salary will be commensurate with experience and qualifications. Send curriculum vitae, a statement of research interest and names with addresses and telephone numbers of at least three references to:

Dr. Joe G. Hollyfield
Chairman, Search Committee
Cullen Eye Institute
Baylor College of Medicine
Houston, TX 77030

POSITIONS OPEN

EVOLUTIONARY BIOLOGY

Department of Biological Sciences of Rutgers University is searching for an **ASSISTANT OR ASSOCIATE PROFESSOR** in evolutionary biology, particularly a scientist working on evolutionary questions by using modern molecular techniques, with any group of organisms. Applicants must have demonstrated research achievement, and develop an active, funded research program, teach, and participate in a large ecology and evolution graduate program within a diverse Department. Excellent start-up funds and laboratory facilities. Send, preferably by 15 April 1988, résumé, statement of research interests, reprints, and names of three references to: **Professor Steven H. Handel, Chair of Evolution Search, Department of Biological Sciences, Rutgers University, Piscataway, NJ 08855-1059.** *Rutgers is an Equal Opportunity/Affirmative Action Employer.*

EXPERIMENTAL PATHOLOGIST

Position is available for a person with an M.D. degree and trained in anatomic and/or clinical pathology, and techniques of molecular biology. Candidate must have a demonstrated record of productivity as evidenced by prime authorship publications in critically reviewed journals and as Principal Investigator on USPHS grants or contracts. The candidate will be expected to initiate and maintain an independent, extramurally funded research program. At least 75% of time will be available for research, and teaching Pathology to medical students and residents will be assigned.

Please send curriculum vitae and a letter describing current and planned research goals, and the names of three references to:

John W. Kreider, M.D.
Division of Experimental Pathology
Department of Pathology
The Milton S. Hershey Medical Center
P.O. Box 850
Hershey, PA 17033

*An Affirmative Action/Equal Opportunity Employer.
Women and Minorities Encouraged to Apply.*

FACULTY POSITION

The Department of Microbiology and Immunology, East Carolina University School of Medicine invites applications for tenure-track positions at assistant or associate professor levels. Applicants must hold a Ph.D. or equivalent degree, and have at least 2 years of postdoctoral training. Associate professor candidates must have an established, well-funded research program. Preference will be given to candidates having considerable experience in using contemporary molecular biology techniques to study problems in virology, immunology, or bacterial pathogenesis. Successful candidates will be expected to develop/maintain a vigorous, grant-supported research program, and participate in the training of medical and graduate students and postdoctoral fellows. Teaching in medical and graduate courses is required. Salaries and research start-up support are nationally competitive. Submit curriculum vitae, description of research interests, and names of three references by 15 June 1988 to: **Paul V. Phibbs, Chairman, Department of Microbiology and Immunology, School of Medicine, East Carolina University, Greenville, NC 27858-4354.** *An Equal Opportunity/Affirmative Action Employer. Federal Law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application.*

FRUIT TREE MOLECULAR GENETICIST.

Twelve-month tenure-track position (80% research; 20% teaching). Research will be part of a team that investigates the genetic and physiological bases for pest resistance and improved productivity of *Prunus*. Teaching will be at undergraduate and graduate levels in area of specialization. Candidates must have earned Ph.D. in plant science with emphasis in genetics, physiology, or biochemistry with experience in molecular biology desirable. Applicants should submit curriculum vitae and official transcripts and arrange for three letters of reference to be sent by 1 May 1988 to: **Dr. D. C. Coston, Department of Horticulture, Clemson University, Clemson, SC 29634-0375.** *Clemson University is an Equal Opportunity/Affirmative Action Employer.*

THE VETERINARY INFECTIOUS DISEASE ORGANIZATION (VIDO), an established laboratory concentrating on the study of infectious disease and immunological approaches to prevent disease in domestic animals and **THE ANIMAL BIOTECHNOLOGY GROUP**, an interdisciplinary team which includes faculty from Agriculture, Veterinary Medicine and Medicine and VIDO and **THE WESTERN COLLEGE OF VETERINARY MEDICINE** at the **UNIVERSITY OF SASKATCHEWAN, SASKATOON, SASKATCHEWAN** have the following positions available:

VETERINARY INFECTIOUS DISEASE ORGANIZATION:

IMMUNOLOGY/IMMUNOCHEMISTRY—The Veterinary Infectious Disease Organization (VIDO), at the University of Saskatchewan, has a position for an immunologist with a strong interest in developing vaccination regimes for infectious diseases of animals. Major projects are in the area of viral and bacterial pneumonias and enteritides of cattle and swine. The applicant will be part of a large team of molecular biologists, immunologists and veterinarians investigating mechanisms of enhancing immunity to recombinant DNA produced proteins or synthetic peptides as potential vaccines. Experience in adjuvants would be a definite asset. Applicants should have a degree in microbiology or veterinary medicine, together with a Ph.D. in immunology with an interest and experience in potentiation of immune responses to natural or synthetic viral and bacterial antigens, serological techniques and assays for humoral and CMI responses. A strong interest in the application of modern immunological techniques to the solution of problems related to the diagnosis and control of infectious diseases of animals is essential.

Applications must be submitted by May 31, 1988.

MOLECULAR BIOLOGY/VIROLOGY—Two positions for individuals with expertise in molecular biology, cloning and expression of viral genes. Expertise in various types of expression systems would be an asset. The level of appointment would be dependent on the individuals' expertise ranging from the post-doctoral level up. These individuals will work with a team of virologists, molecular biologists, immunologists and veterinarians interested in developing methods to prevent and control economically important viral diseases of the respiratory and enteric systems. The potential exists for a senior virologist to become program manager of the virology group. In the latter case, experience in managing a number of projects using both conventional and molecular virology approaches and interpersonal skills would be a prerequisite.

Inquiries and applications should be directed to:

Lorne A. Babiuk
Veterinary Infectious Disease Organization
124 Veterinary Road
Saskatoon, Saskatchewan
Canada, S7N 0W0

ANIMAL BIOTECHNOLOGY GROUP:

IMMUNOLOGY/HORMONE REGULATION—The Veterinary Infectious Disease Organization (VIDO) in collaboration with the Animal Biotechnology Group, which includes faculty from the Colleges of Agriculture, Veterinary Medicine and Medicine at the University of Saskatchewan is developing a program to study immunological control of growth and reproduction in livestock. A position is available for an individuals interested in developing methods of hormone immunoneutralization which will influence these production traits. Studies are underway in the area of growth, lactation, increasing reproductive rates as well as sterilization. Applicants should have a Ph.D. in immunology with a strong interest in physiology. As part of the animal biotechnology group, the candidate will have access to protein chemists, molecular biologists, animal scientists, veterinarians and physiologists. Experience in application of monoclonal antibodies to hormone regulation would be an asset. The successful candidate should also have expertise in adjuvants, conjugating antigens to various protein carriers and a variety of serological assays to determine immune responses to specific hormones.

Applications must be submitted by May 31, 1988.

MOLECULAR ENDOCRINOLOGIST/BIOLOGIST—Two positions for individuals with expertise in endocrinology at the molecular and systems level. One position will emphasize cellular and subcellular aspects of growth factors and their receptors in studies of growth physiology. Experience in the use of immunological techniques such as monoclonal antibody's production would be helpful. The other position will emphasize the mammalian reproductive system and will employ immunological techniques to increase rates of ovulation, implantation and embryo survival.

Inquiries and applications should be directed to:

J. G. Manns
Associate Vice President (Research)
50 Murray Building
University of Saskatchewan
Saskatoon, Saskatchewan
Canada, S7N 0W0

WESTERN COLLEGE OF VETERINARY MEDICINE

Tenure track position at the **Assistant Professor** level in the Department of Veterinary Physiological Sciences. The candidate must have a Ph.D. in physiology with extensive experience in the methods of biotechnology as applied to endocrinology. A degree in Veterinary Medicine is highly desirable. The appointee will be involved in the department's teaching program at both the undergraduate and graduate level. He/she will be expected to develop an independent research program and to contribute as a member of a team of molecular biologists, immunologists and physiologists participating in a major new interdisciplinary research program in Animal Biotechnology.

Salary will be commensurate with experience and qualifications.

Inquiries and applications should be directed to:

Dr. C. S. Sisodia, Chairman, Search Committee
Department of Veterinary Physiological Sciences
W.C.V.M.
University of Saskatchewan
Saskatoon, Saskatchewan
Canada, S7N 0W0

Applications must be submitted by May 31, 1988.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

POSITIONS OPEN

FACULTY POSITION

The Department of Biochemistry and Biophysics, University of California, Davis, invites applications for a full-time (11 months per year) tenure-track appointment as an assistant professor of biochemistry and assistant biochemist in the Agricultural Experiment Station. A Ph.D. or equivalent degree is required in biochemistry or closely related field; postdoctoral experience of at least 2 years is preferred. Preference will be given to applicants with demonstrated research competence in the general area of eukaryotic molecular biology. In addition to research, duties involve teaching in graduate and undergraduate biochemistry courses, advising students and guiding graduate students to advanced degrees in biochemistry. Applications must be received by 1 August 1988. Candidates should submit a résumé, copies of publications, outline of proposed research program, and the names and addresses of three references to: **Dr. Roy H. Doi, Chair, Search Committee, Department of Biochemistry and Biophysics, University of California, Davis, CA 95616.** *The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

FACULTY POSITION IN TOXICOLOGY UCLA SCHOOL OF PUBLIC HEALTH

The Division of Environmental and Occupational Health Sciences of the UCLA School of Public Health invites applications for a tenure track faculty position in toxicology. Emphasis will be on an appointment at the professorial level although an appointment at the assistant or associate professor level will be considered. The candidate should have an established scientific reputation with national and international standing; a strong background in chemistry, biochemistry, or the basic biological sciences; and research interests in biochemical or environmental toxicology. The appointee will be responsible for expanding the research and teaching program in toxicology at the School of Public Health and will interact with faculty in the Division, the Southern Occupational Health Center and the Environmental Science and Engineering Program.

Qualified individuals should send curriculum vitae and the names and addresses of three references to: **Dr. John R. Froines, Chair, Search Committee, Division of Environmental and Occupational Health Sciences, UCLA School of Public Health, Los Angeles, CA 90024.** *The University of California is an Affirmative Action/Equal Opportunity Employer and will welcome applications from members of minority groups and women. Applications will be received until 15 May 1988.*

Under Federal law, the University of California may employ only individuals who are legally authorized to work in the United States as established by providing documents specified in the Immigration Reform and Control Act of 1986.

FACULTY POSITIONS IN MOLECULAR BIOLOGY OF MEMBRANE PROTEINS

Applications are invited from individuals with a strong record of research on membrane protein structure and function for faculty positions at the full, associate, or assistant professor level. We are particularly interested in individuals using genetic and recombinant DNA approaches in the study of membrane transport proteins. Modern laboratory space and substantial start-up funds are available. Rank and salary will be based on academic and research record. Excellent opportunities exist for interaction with molecular biology and neuroscience faculty from basic science and clinical departments and with genetics and neuroscience Ph.D. programs. Minimum requirements include the Ph.D. and/or M.D. degree, and 2 years of postdoctoral training. Candidates should send curriculum vitae, description of research activities, representative reprints, and the names of three or more references to:

**Dr. Kevin P. Campbell
Department of Physiology and Biophysics
The University of Iowa College of Medicine
Iowa City, IA 52242**

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

POSITIONS OPEN

FACULTY POSITION. The Department of Physiology/Biochemistry, Medical College of Pennsylvania is accepting applications for a position at the assistant professor level. The applicant should have training in the area of vascular physiology with research interests related to atherosclerosis and experience in imaging techniques. The successful applicant is expected to establish a strong research program and to interact with other faculty members within the framework of a well-established lipoprotein/atherosclerosis research group. Teaching duties will include areas of cardiovascular physiology to medical students and a contribution to graduate courses. A joint appointment in the Department of Radiology is possible. To apply, send detailed letter of application, curriculum vitae, and the names of three references to: **Dr. George Rothblat, Chairman, Department of Physiology/Biochemistry, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, PA 19129.** *An Equal Opportunity Employer.*

ICHTHYOLOGICAL COLLECTION MANAGER UNIVERSITY OF WASHINGTON (UW)

The School of Fisheries seeks to fill a full-time staff position with responsibility for the care and maintenance of a fish collection of about 30,000 lots devoted primarily to the fauna of the North Pacific Ocean and Bering Sea. Duties include field work, identification, curation, loan management, and responding to scientific and public inquiries. Candidates must have a B.S. in biology or related field and 2 years of experience working with museum collections. Computer data-base experience is desirable. Call UW Staff Employment: **206-543-2544** to request official application packet (résumés may not be substituted). Application packets must be submitted by 1 June 1988. Reference #0209 (Curator 1). *Affirmative Action/Equal Opportunity Employer.*

INFECTIOUS DISEASES/AIDS VACCINE PROGRAM—Full-time position available at assistant or associate professor rank for infectious diseases specialist with experience in HIV-immunology to evaluate AIDS vaccines. Position also involves clinical and teaching activities in general infectious diseases in the School of Medicine and in the Department of International Health of the School of Public Health. Please contact: **Dr. Mary Lou Clements, Johns Hopkins University (JHU) Center for Immunization Research, 624 North Broadway, Baltimore, MD 21205.** *JHU is an Equal Opportunity/Affirmative Action Employer.*

IMMUNOCHEMIST

Progressive and dynamic biotechnology and food products company is seeking B.S./M.S. in immunology/microbiology/biochemistry with 2 years of laboratory experience in protein separation, protein labeling; background in immunology and tissue culture helpful. Must be a self-starter and able to work with minimum supervision in this lead role position. Salary commensurate with experience. Send résumé (including three references) and salary history in confidence to: **Pel-Freez, Inc., Human Resources Department, P.O. Box 68, Rogers, AR 72757.** Deadline: 22 April 1988.

Pel-Freez is an Equal Opportunity Employer.

IMMUNOLOGIST

The Clinical Research Center for Periodontal Diseases and the Dental Research Institute of the University of Minnesota invite applications for a tenure-track faculty position to pursue independent research and collaboration with CRCPD and DRI investigators. Applicants with outstanding programs or promise in any area of modern immunology are encouraged to apply. Candidate must have a D.D.S. degree with 5 years of research experience or a Ph.D. and postdoctoral experience. Excellent laboratory facilities and start-up funds are available. Applicants should submit curriculum vitae, a statement of professional goals, and the names of three references by 30 May 1988 to: **Dr. Mark C. Herzberg, Chairperson, Immunologist Search Committee, School of Dentistry, 17-164 Moos Tower, University of Minnesota, Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer, and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

IMMUNOLOGY AND INFECTIOUS DISEASES

The Department of Immunology and Infectious Diseases of the Research Institute of the Palo Alto Medical Foundation seeks an M.D. or Ph.D. **IMMUNOLOGIST** with at least 2 years of postdoctoral experience. The individual will join a department with a focused interest in the area of host resistance to infection and should be capable of establishing an active independent program in this area. Adequate resources will be provided to do this.

The Research Institute of the Palo Alto Medical Foundation is a well-equipped, not-for-profit institute located in downtown Palo Alto near the Stanford University campus.

Send curriculum vitae, a description of research interests, and names, addresses, and telephone numbers of at least three references to:

**Jack S. Remington, M.D., Chairman
Department of Immunology and Infectious Diseases
Research Institute
Palo Alto Medical Foundation
860 Bryant Street
Palo Alto, CA 94301**

INSTRUCTOR IN BIOCHEMISTRY. A position is available in the Department of Physiology and Biochemistry for an individual capable of contributing substantially to a research program focused on the cellular differentiation of the mammary gland and the role of retinoids in this process. It is expected that the successful candidate will have expertise in protein and glycoprotein purification, enzyme isolation, preparation and use of monoclonal antibodies, and histochemical procedures. The ability to evaluate pathologic changes in mammary tissue would be advantageous. Applicants must hold a Ph.D. or M.D. degree, have previous postdoctoral experience, and have the potential to develop as an independent researcher. Participation in the medical and graduate teaching programs in biochemistry is expected. Applicants are requested to send a letter detailing past research and teaching experience, and request that three letters of recommendation be sent to: **Dr. A. Catharine Ross, Department of Physiology and Biochemistry, the Medical College of Pennsylvania, Philadelphia, PA 19129.**

An Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGIST to conduct studies on the molecular mechanisms involved in neoplastic development. Must have at least 5 years of postdoctoral experience in recombinant DNA techniques, with particular emphasis on cDNA cloning, site-directed mutagenesis, DNA sequencing by chemical and enzymatic methods, and expression of biological modulators and oncogenes using bacterial and mammalian expression vectors. Must have demonstrated accomplishments in the isolation and molecular characterization of human oncogenes, as well as oncogenes activated by chemical carcinogens in animal tumor systems. Salary commensurate with qualifications. Submit curriculum vitae to: **The Squibb Institute for Medical Research, Human Resources Department 400, Princeton, NJ 08543.** *An Equal Opportunity Employer.*

MOLECULAR BIOLOGY/ CANCER BIOLOGIST

Tenure-track assistant professor position available in the Department of Urology with a joint appointment in one of the basic science departments. Persons interested in regulatory and developmental biology and endocrinology of the male reproductive system are particularly encouraged to apply. Applicants should have completed postdoctoral training, and are expected to develop an independent research program and participate in graduate/postdoctoral/resident training. Send curriculum vitae and names of references to: **Leland W. K. Chung, Ph.D., Box 026, Department of Urology, The University of Texas System Cancer Center M.D. Anderson Hospital and Tumor Institute, Houston, TX 77030.** Application should be submitted before 1 June 1988. *Equal Opportunity/Affirmative Action Employer.*

**MOLECULAR BIOLOGISTS
STAFF FELLOW/SENIOR STAFF FELLOW
NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE**

Fellowships available for experienced molecular biologists for a megabase DNA sequencing project involving automated DNA sequence analysis of neurotransmitter receptor genes (PNAS 84 8296-8300, 1987) and of disease loci of human chromosomes and for site directed mutagenesis studies involving adrenergic and muscarinic cholinergic receptors (JBC 263, 4052-4055, 1988)

Applicants must be U.S. citizens or resident aliens
Initial appointment is for two years with extensions possible up to 7 years

Starting salary will be commensurate with experience
For staff fellows (less than 3 years postdoctoral experience)
\$20,000 to \$37,997

For senior staff fellows (over 3 years postdoctoral experience)
\$24,000 to \$42,600

For further information and qualifications call
Janet Clagett, NINCDS Personnel Office
301-496-6334

Applicants should send their curriculum vitae and names of three references to

J. Craig Venter, Ph.D., Chief

Receptor Biochemistry and Molecular Biology Section
Laboratory of Molecular and Cellular Neurobiology
National Institute of Neurological & Communicative Disorders & Stroke
NIH
Park Building, Room 405
Bethesda, Maryland 20892

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

**POSTDOCTORAL FELLOW
Neurobiology**

The Wellcome Research Laboratories, located in Research Triangle Park, North Carolina, has a Postdoctoral Fellow position available in the Department of Medicinal Biochemistry.

The position involves multidisciplinary approaches to study the mechanism of neurotransmitter/hormone synthesis and secretion. The candidate will be mostly concerned with the coordinated regulation of neuropeptide synthesis and processing and stimulus-secretion coupling using the adrenomedullary chromaffin cells in culture as a model system. This position will also investigate the functional significance of opioid peptide-amine co-secretion on the regulation of respiration and circulation. M.D. or Ph.D. in Physiology, Biochemistry or Pharmacology (or equivalent) with strong training and/or experience in neurochemistry and physiology or arterial chemoreceptors.

BURROUGHS WELLCOME CO. offers a comprehensive company-paid benefit package, a competitive salary and an excellent environment in which to apply your professional capabilities. Qualified minority, female, veteran and handicapped individuals are encouraged to apply. To apply, forward curriculum vitae, with transcript, to:

Employment Supervisor
Position #3014

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3030 Cornwallis Road
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Wellcome

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Chemical Abstracts Service (CAS), a division of the American Chemical Society, is the acknowledged world leader in chemical information services. Founded in 1907, CAS produces a variety of printed, computer-based, and on-line information services. Our continued growth has resulted in a number of available positions.

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The continuing growth of CAS's information services has created a number of new positions. These full-time career opportunities allow scientists to make an important contribution to science by analyzing the world's chemical journal and patent literature. Positions in the following areas are available for technically qualified individuals with good English language skills:

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GENETICS
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PROTEIN BIOCHEMISTRY
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ORGANIC CHEMISTRY
METALLURGY
GEOCHEMISTRY
MATERIALS CHEMISTRY
INORGANIC CHEMISTRY
PHYSICAL CHEMISTRY**

Preferences will be given to applicants who have a reading comprehension of Czech, French, German, Japanese, Polish, or Russian.

The Environment

CAS is located in Columbus, Ohio, a growing and dynamic metropolitan area with excellent housing, cultural, recreational, and transportation facilities. Our modern offices, situated in a campus-like setting, provide a professional, state-of-the-art working environment.

The Rewards

CAS provides a complete benefits package, which includes an excellent employer-paid retirement plan, relocation assistance, tuition reimbursement, and a range of insurance programs, as well as salary scales commensurate with your background and experience.

To apply for one of these positions, please contact:

**CHEMICAL ABSTRACTS
SERVICE**

Employment & Staff
Development Department
P. O. Box 3012
Columbus, Ohio 43210



An Equal Opportunity Employer M/F

The World Health Organization (WHO) is an inter-governmental agency internationally recognized for its efficiency, integrity and numerous lasting achievements. Guided by humanitarian concerns WHO works to direct and coordinate global and national efforts to improve the health of peoples throughout the world. To meet its objectives, WHO depends on staff members with special qualities of leadership, dedication and commitment.



The UNDP/WORLD BANK/WHO Special Programme for Research and Training in Tropical Diseases (TDR) is a globally coordinated effort to bring the resources of modern science to bear upon the control of major tropical diseases and to strengthen the research capability of endemic, developing countries where new disease control technologies are most needed. To meet its objectives, TDR has recruited into its global network scientists of the highest calibre to participate in this international research effort.



TDR is seeking to fill the post of scientist for a qualified

Epidemiologist

to be stationed at WHO headquarters in Geneva, Switzerland

TDR has taken a leading role in the development of a variety of new disease control tools against tropical diseases and is now entering a new phase which will emphasize the development of field research required for the testing of these new tools. The key activities in this new phase will involve the establishment of a network of field research and training projects, including the development of regional coordinating centres.

TDR is therefore seeking an epidemiologist with experience in tropical disease research and teaching in developing countries. The winning applicant will work in close liaison with a multidisciplinary group of scientists to stimulate and promote this new set of activities. The challenge will be to take a leading role in determining field research priorities, developing study design outlines and research protocols, and organizing workshops, "summer schools" and training activities geared to "on-the-spot" training in field research methods in tropical disease-endemic areas.

Applicants should have at least five year's experience in epidemiological research and training, including in a developing country, and two year's international experience in promoting and managing such activities. A doctoral degree in a field related to epidemiology and postgraduate training in epidemiology is a requirement, as is an excellent knowledge of English or French, with a good working knowledge of the other.

Please send your detailed curriculum vitae by 15 May 1988 to Personnel (MPR), Avenue Appia, CH-1211 Geneva 27, quoting EPD/TDR/88 and the name of the journal in which this announcement appeared. Applications from women are encouraged. Only candidates under serious consideration will be contacted.

World Health Organization

Headquarters in Switzerland with Regional Offices in Congo, Denmark, Egypt, India, Philippines and the USA

RHÔNE-POULENC

RHÔNE-POULENC AG COMPANY

TOXICOLOGIST

RHÔNE-POULENC INC. and RHÔNE-POULENC AG COMPANY are the growing U.S. subsidiaries of one of the largest diversified chemical companies in the world. Our Toxicology Department, headquartered in Research Triangle Park, N.C., is expanding to meet the growing needs of our crop protection business, as well as several other business groups.

This entry-level position for a mammalian toxicologist is available immediately. The successful candidate will assist in establishing and maintaining toxicological testing programs for U.S. products, provide technical expertise to marketing groups, assist in the design, monitoring and reporting of contracted laboratory studies, and assist in the preparation of regulatory-compliance documentation.

A Ph.D. in Toxicology or a related discipline is required, with 0-2 years of related experience. Knowledge of mammalian toxicology is essential. Familiarity with environmental toxicology is also desirable.

Rhone-Poulenc offers a competitive salary, attractive benefits and the chance to join a growing, vital, dynamic organization in a position with opportunities for career growth. Send resume (including salary requirements) to:

Employment Coordinator

RHÔNE-POULENC AG COMPANY
PO Box 12014
Research Triangle Park, NC 27709

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Senior Scientist

VIROLOGY

As one of the world's most innovative and highly regarded pharmaceutical and medical research organizations, Hoffmann-La Roche is continuing a tradition of commitment to a healthier tomorrow with our HIV research programs.

As a result, we have a newly created opportunity for a Senior Scientist/Virologist to join a multidisciplinary team engaged in the fight against AIDS. Working with Molecular Biologists, Medicinal and Protein Chemists, Immunologists and other members of the team, you will explore the function of HIV genes and participate in the formulation of appropriate strategies for antiviral therapy.

To qualify, you must possess a PhD with at least 2 years of postdoctoral experience. The ideal candidate will have a background in retrovirology or molecular/cell biology, with a strong record of research in virology.

In return, we offer an environment that fosters innovative and important research, professional development, and a comprehensive compensation package. For consideration, please send your resume and 3 references to: Mrs. Eleanor M. Malone, Professional Employment and Staffing Specialist, Hoffmann-La Roche Inc., Nutley, New Jersey 07110. We are an equal opportunity employer.



Hoffmann-La Roche

Working Today For A Healthier Tomorrow

ASSISTANT PROFESSOR/ ASSOCIATE PROFESSOR Department of Biochemistry

The Department of Biochemistry of the University of Medicine and Dentistry of New Jersey-New Jersey Medical School, Newark, NJ, is seeking candidates for a faculty position at the Assistant or Associate Professor level. The position is available for the Fall of 1988. Candidates should have training in biochemistry or cognate fields and have a minimum of 3 years of postdoctoral training. Candidates will be expected to conduct active, independent and funded research programs and participate in the teaching of medical, dental and graduate students.

Candidates with interests in immunochemistry, transmembrane signaling, and gene amplification are being sought, but outstanding candidates with other research interests will be considered.

Interested candidates should submit their curriculum vitae and bibliography, a statement concerning research interests, record of grant awards, three letters of recommendation supporting research and teaching ability and reprints of most significant work, by June 30, 1988, to: **Norbert I. Swislocki, Ph.D., Professor and Chairman, Department of Biochemistry, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 185 South Orange Avenue, Newark, NJ 07103-2757.**

The UMDNJ is an Affirmative Action/Equal Employment Opportunity Employer M/F/H/V.





YORK UNIVERSITY
Department of Chemistry

**The Guy Warwick Rogers Chair
in Atmospheric Chemistry**

Applications are invited for the Guy Warwick Rogers Chair in Atmospheric Chemistry, a tenured position within the Department of Chemistry. The applicant must be familiar with important chemical processes in the atmosphere, sources and sinks of significant atmospheric species, instrumental methods of measuring these species, and computer modelling of the atmosphere, and must be well recognized in at least one of these areas.

The successful candidate will have the opportunity to participate in activities of the **York University Centre for Atmospheric Chemistry** and the **Canadian Institute for Research in Atmospheric Chemistry (CIRAC)**.

Applications will be evaluated as received. The closing date for applications is August 1, 1988.

Applications consisting of a curriculum vitae, a summary of research plans and interests, and the names and addresses of three referees should be sent to **Dr. H. Niki, Chairman, Search Committee, Department of Chemistry, York University, 4700 Keele St., North York, Ontario, Canada M3J 1P3**.

In accordance with Canadian Employment and Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. York University is implementing a policy of employment equity. Qualified women and men are invited to apply.

SENIOR SCIENTIST/ PROJECT SCIENTIST

Ph.D. in physical sciences or engineering with research and publications written on an aerosol physics subject, with at least three years of active, related post-doctoral work experience, including designing and building laboratory equipment. A candidate with a background in fluid dynamics and heat transfer analyses is required. Will perform experimental measurements of hygroscopic particle growth kinetics and deposition rates of particulate matter of health effects concern. Will be responsible for developing a surrogate bifurcating airway system in which the fluid dynamics and atmospheric environment (temperature and relative humidity) of the human respiratory tract *in vivo* are simulated. Will operate instrumentation necessary to generate and characterize the monodisperse aerosols upon which the hygroscopic growth and deposition measurements will be conducted within the *in vitro* system. Will also be responsible for purchasing, designing, and building necessary laboratory equipment. A candidate familiar with integrated laser-fiber optics technology theory and experience utilizing laser particle sizing instrumentation is preferred.

Salary: \$35,880.00

Hours: 8:00 A.M. - 4:30 P.M.

Contact the Job Service Office at 516 North Mangum Street, Durham, NC 27701 or the Job Service nearest you. Refer to Job Order Number NC 7102179, DOT code 029.081 - 010.

An Equal Opportunity Employer

PHARMACEUTICAL

RESEARCH SCIENTISTS

- **Fermentation Microbiologist**
- **Separations/Isolation Chemist**

Make a Vital Contribution in the Natural Products Drug Discovery Effort in our new Pharmaceutical R&D Organization.

EASTMAN PHARMACEUTICALS, a division of Eastman Kodak Company is building its R&D operations in Chester County, PA near Philadelphia. We have two immediate openings for experienced Research Scientists in our new natural products drug discovery program.

We are establishing the nucleus of an interdisciplinary team and are anticipating significant growth. We seek highly motivated individuals with a proven track record in the discovery and evaluation of novel pharmacologically active molecules from natural products sources.

Microbiologist— Candidate must have a Ph.D. degree, preferably in microbiology, biochemistry, or bioengineering, with a minimum of 3 years experience in small to medium scale fermentation of wild microorganisms for production of pharmacologic agents.

Initial responsibilities will include establishing a functional fermentation laboratory, supervising two research assistants, maintaining a production organism culture collection and database, and bioassay-guided fermenting of lead cultures for chemical isolation of pharmacologic agents. Experience in process and strain improvement, as well as familiarity with the taxonomy and ecology of fungi, actinomycete and soil bacteria would be highly desirable.

Isolation Chemist— Candidate must have a Ph.D. degree with a minimum of 2 years relevant work experience in the bioassay-guided isolation of natural products from fermentation broths, plants, or tissue homogenate. Expertise in state-of-the-art separation techniques, and familiarity with analytical chemistry methods for structure elucidation are critical.

Initial responsibilities will include establishing functional isolation chemistry facility, supervising a research assistant, and establishing isolation schemes for the preparative separation of active agents from fermentation and plant sources.

We offer competitive salaries, a comprehensive benefits package and the opportunity for career growth in our dynamic, new organization. For confidential consideration, qualified applicants should send their resume, with salary history/requirements to: **Personnel Relations, Department MICR, EASTMAN PHARMACEUTICALS, 9 Great Valley Parkway, Great Valley, PA 19355**. An Equal Opportunity Employer, M/F.

Eastman Pharmaceuticals

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POSITIONS OPEN

MACROMOLECULAR CHEMIST

The Brown University Division of Biology and Medicine is seeking a macromolecular chemist to operate and manage its newly established Macromolecular Biochemistry Facility. This is a fee-for-service facility, located in the Section of Biochemistry, which contains equipment for automated peptide synthesis and purification, amino acid analysis, and oligonucleotide synthesis. Applicants should hold an M.S. in organic chemistry or a B.S. in chemistry with at least 4 years of experience in organic synthesis and compound purification. The successful applicant will be expected to operate and maintain the equipment as well as keep records of income and expenditures. Previous experience with peptides helpful but not required. Starting salary range is \$18,900 to \$24,000 depending on experience. Send résumé and three letters of reference to:

Dr. Wayne D. Bowen
Assistant Professor of Biology and
Director of Macromolecular Biochemistry Facility
Division of Biology and Medicine
Brown University, Box G
Providence, RI 02912

Brown University is an Equal Opportunity/Affirmative Action Employer.

MANAGER, QUALITY ASSURANCE

Ambico, Inc., a rapidly growing veterinary biotechnology company, located just outside Des Moines, Iowa, is seeking a manager for its Quality Assurance Department. We will consider candidates with a Ph.D., D.V.M., or M.S. degree and work experience in tissue culture, virology, bacteriology, enzyme assays, and U.S.D.A. regulatory procedures. Responsibilities will also include certain developmental activities in collaboration with our Research Department. This is an excellent growth opportunity for the right individual. Please send résumé to: **Human Resources, Ambico, Inc., Box 522, Dallas Center, IA 50063.**

MICROCIRCULATION—POSTDOCTORAL POSITION to study microcirculatory hemodynamics. Work includes measurement of hemodynamic variables in microvessels in vivo, development of relationships in vitro, and use of computer simulations to interpret characteristics of in vivo blood flow. Ph.D. in physiology, biomedical engineering, or related field, preferably with appropriate experience. Résumé and three letters of recommendation to: **Dr. Giles R. Cokelet or Dr. Ingrid H. Sarelius, Department of Biophysics, University of Rochester, Rochester, NY 14642.** *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGIST at the assistant or associate professor level beginning 1 September 1988. Appointee will teach undergraduate courses at the introductory and intermediate levels and will be expected to develop and offer courses in cell biology, research methods, and related areas. Washington and Jefferson College is a private, independent, liberal arts institution enrolling 1,200 students and is located 25 miles south of Pittsburgh. Deadline is 30 April 1988. Apply to: **Dr. Herbert E. Wylen, Vice President and Dean of the College, Washington and Jefferson College, Washington, PA 15301.** *Equal Opportunity Employer.*

NUTRITIONAL BIOCHEMIST

The Department of Food Science, North Carolina State University, invites applications for a position as assistant professor (tenure-track). Applicants must have a Ph.D. degree and a strong background in nutritional biochemistry. Postdoctoral experience is preferred. Applicants will be expected to establish a research program which complements existing nutrition programs within the Department, teach an advanced undergraduate or graduate course in nutrition, cooperate with other faculty members in nutrition-related activities, and direct M.S. and Ph.D. graduate research programs. Applicants should submit curriculum vitae, transcripts of all academic work, a statement of research interest and goals, reprints of recent significant publications and three letters of recommendation to: **Dr. George L. Catignani, Box 7624, Department of Food Science, North Carolina State University, Raleigh, NC 27695-7624.** Applications will be accepted until 1 June 1988 or until a suitable candidate is found. Applicants will be required to furnish proper documentation of identity and employability. *North Carolina State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

MOLECULAR BIOLOGIST to conduct studies on the molecular mechanism involved in neoplastic development. Must have at least 3 years of postdoctoral experience in immunological techniques (Western blotting, RIAs, etc.) and in the development of monoclonal antibodies against viral oncoproteins. Extensive experience in culture techniques utilizing embryonal stem cell lines as well as expertise in recombinant DNA technology including DNA sequencing and expression of genes in mammalian cells using retroviral vectors is required. Salary commensurate with qualifications. Submit curriculum vitae to: **The Squibb Institute For Medical Research, Human Resources Department 300, P.O. Box 4000, Princeton, NJ 08543.** *An Equal Opportunity Employer.*

PHARMACEUTICAL CHEMIST. Company needs Group Leader, Trichothecene Conjugation Group to develop new and improved conjugation procedures for simple and macrocyclic trichothecenes; establish principles to predict the structure of the best molecules to construct antibody conjugates; develop trichothecene immunoconjugates and test for selectivity for tumor cells in vitro; help immunopharmacology group develop animal models to test conjugates' potency against established tumors; develop toxicology assessment in animals; analyze metabolites of conjugates; develop scale-up procedures to make conjugates for clinical trials according to Good Manufacturing Practices. Job requires Ph.D. in chemistry. Research during Ph.D. program must be in area of trichothecenes and include linking trichothecenes to antibodies preserving their activities. Research must also include use of the following equipment and techniques: isolation, purification and identification techniques, High-Performance Liquid Chromatography (HPLC), IR and UV-Vis Spectroscopy; high-field and two-dimensional NMR. Forty hour week; 8:00 a.m. to 5:00 p.m.; \$37,665 per year. Position in Seattle, Washington. Mail résumé within 30 days of 8 April 1988 to: **The Employment Security Department, ES Division, Attention: AEC #46494J, Olympia, WA 98504.** *An Equal Opportunity, Affirmative Action Employer.*

PHARMACOLOGY FACULTY POSITION. The Department of Pharmacology and Toxicology at the Medical College of Virginia invites applications for a tenured faculty position at the rank of associate or full professor. We are seeking an outstanding scientist studying the neurochemical or molecular pharmacology of drugs of abuse to join an established multidisciplinary research effort and to contribute to the teaching of graduate and professional students in the area of CNS pharmacology. Send curriculum vitae and the names and addresses of three references to: **Dr. Louis S. Harris, Chairman, Department of Pharmacology and Toxicology, Medical College of Virginia, Virginia Commonwealth University, Box 613, Richmond, VA 23298-0613** by 15 May 1988. A complete job description and qualifications will be sent on request. *Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

PLANT ANATOMIST CELL BIOLOGIST

The Department of Botany and Plant Pathology, Purdue University, invites applications for a tenure-track assistant professor position. The incumbent will be responsible for the development of an independent basic research program in structural and cytological aspects of plant growth, development and differentiation, or cytological aspects of adaptive changes to environmental or biological stresses. Teaching responsibilities include an introductory plant anatomy course, and a graduate level course that provides students with training in modern approaches to plant anatomy and cell biology. Applications will be received until 30 April 1988 or until a suitable candidate is found. Submit curriculum vitae, transcripts, reprints of significant publications, a statement of research interests, and three letters of reference to: **Dr. Ronald Coolbaugh, Head, Department of Botany and Plant Pathology, Purdue University, West Lafayette, IN 47907.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PLANT BIOCHEMIST: Department of Biochemistry, University of Nebraska-Lincoln. A 12-month tenure-track position with 80% research and 20% teaching at the assistant or associate professor level. Will be expected to develop a plant research program that relies on modern biochemical and molecular biological techniques. A Ph.D. in biochemistry, or closely related area, and postdoctoral experience are required. Submit curriculum vitae, statement of research interests and plans, representative reprints, and three letters of reference by 2 May 1988 (or until suitable applicant is found thereafter) to: **Dr. Robert Klucas, Department of Biochemistry, 206 Biochemistry Hall, University of Nebraska-Lincoln, Lincoln, NE 68583-0718.** Telephone: 402-472-2932.

Affirmative Action/Equal Opportunity Employer

SIMON FRASER UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES

PLANT PATHOLOGY: Applications are invited for a tenure-track position at the **ASSISTANT OR BEGINNING ASSOCIATE PROFESSOR** level in the general area of plant pathology. The successful candidate is expected to participate in the Department's undergraduate teaching program, preferably in the area of plant pathology, physiology, biochemistry or microbiology. In addition, the position includes graduate level instruction and supervision of students in the Department's Ph.D., M.Sc., and Master of Pest Management program. Applicants should have a strong research record in some aspect of basic and/or applied plant pathology. The position is available immediately.

Applications together with an up-to-date curriculum vitae, an outline of research interests, reprints of published research, and the names of three referees should be sent to:

Dr. L. M. Srivastava, Chairman
Department of Biological Sciences
Simon Fraser University
Burnaby, B.C., V5A 1S6, Canada

Closing date for applications is 31 May 1988 or when the position is filled. *In accordance with Canadian Immigration regulations, this advertisement is directed in the first instance to the attention of those individuals legally entitled to work permanently in Canada.*

PLANT PHYSIOLOGICAL ECOLOGY—POSTDOCTORAL POSITION (1-year minimum, available immediately): Field and laboratory research on plant/soil nutrient relationships of competing perennial species. Training in study of nutrient uptake kinetics, mycorrhizal relationships and rhizosphere interactions utilizing stable and radioactive isotopes desirable. Applicants must have completed Ph.D. by starting date. Send résumé, selected reprints, and names of three references to: **James H. Richards, Ecology Center, Utah State University, Logan, UT 84322-5205.** Closing 25 April 1988 or until suitable applicant found. *USU is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL ASSOCIATE

Postdoctoral position available to study maternal mRNA expression during early *Xenopus* development or the expression of transcription factors using injected *Xenopus* oocytes. Experience in biochemistry/molecular biology required. Send curriculum vitae and three letters of reference to: **Dr. Joel D. Richter, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545.**

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

POSTDOCTORAL ASSOCIATE

Position available in September, 1988, for research on the behavioral pharmacology of opioid drugs in rodents and small primates. Applicants should have received within the last 3 years a Ph.D. in pharmacology or other basic medical science or in experimental psychology. Skill in stereotaxic surgery and in the use of microcomputers is desirable.

Send curriculum vitae and names of three references to: **Stephen G. Holtzman, Ph.D., Department of Pharmacology, Emory University School of Medicine, Atlanta, GA 30322.** *Emory is an Equal Opportunity Employer.*

U.S. PATENT AND TRADEMARK OFFICE

POSITION: Microbiologist/Patent Examiner Opportunity involves the scientific and legal evaluation of patent applications involving recombinant DNA, molecular and cellular immunology, molecular genetics, microorganisms, cell biology, cell culture, fermentation, enzymology or clinical chemistry.

QUALIFICATIONS: A full 4-year or longer professional curriculum in an accredited college or university leading to a Bachelor's Degree or higher with specific study in Molecular Biology, Biochemistry, Immunology, Enzymology, Embryology, Protein Chemistry, Microbiology or Cell Biology.

A Ph.D. or M.S. degree with relevant research experience is preferred. A B.S. degree with significant research experience will be considered.

Research Experience in any of the following areas would be beneficial: DNA cloning, protein chemistry, gene expression, sequencing techniques, muteins, hybridoma technologies, monoclonal antibody applications, mammalian or plant cell lines, cell culture, immunossays, hybridization techniques, fermentation, enzymatic reaction, diagnostics and automation of clinical analysis.

SALARY: Dependent upon experience and qualifications.

LOCATION OF POSITION: Arlington, VA

For further information contact:

Patent and Trademark Office
Office of Personnel, C&E
CPK 1, Suite 700
Washington, D.C. 20231
703-557-3631
Toll free: 800-368-3064

FACULTY POSITIONS IN ENDOCRINOLOGY, DIABETES, AND METABOLISM RESEARCH MAYO CLINIC AND FOUNDATION

The Endocrine Research Unit has unparalleled career opportunities for three highly qualified scientists (Ph.D., M.D., or M.D./Ph.D.) to develop independent research programs in the areas of 1) diabetes mellitus and related disorders, 2) thyroid disease, and 3) bone and mineral metabolism. Candidates should have advanced training in basic sciences related to their research, in such areas as membrane, receptor, or hormone biochemistry; immunology; molecular or cellular biology; or mechanisms of hormone action.

The Endocrine Research Unit has six NIH-funded staff investigators (4 in diabetes/metabolism, and 2 in bone/mineral research), training grant support, ample modern research space and equipment, and active collaborations with members of other departments. Startup funds are available for establishment of the new laboratory programs. Mayo Medical Center encompasses the Mayo Clinic, Mayo Medical School, and the Mayo Graduate School of Medicine. These are career research opportunities with a strong, active, multidisciplinary group.

Qualified candidates should submit detailed curricula vitae, bibliographies, and names of three references to:

Hunter Heath III, M.D.
Chairman, Endocrine Search Committee
Mayo Clinic
5-164 West Joseph Building
Rochester, MN 55905
(Telephone 507-285-4300)



AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER

HIGH LEVEL CAREERS IN TOXICOLOGY RESEARCH

(Avian/Aquatic Studies)

FMC CORPORATION's Chemical R & D Center, is experiencing exciting expansion as we develop new and advanced chemical groups for a variety of industrial and agricultural applications. Located in beautiful Princeton, NJ, we currently have two excellent openings within our Corporate Toxicology Department.

MANAGER ENVIRONMENTAL TOXICOLOGY

This position requires an experienced Avian/Aquatic Toxicologist to manage our Environmental Toxicology Group. This manager will have worldwide responsibility for the following:

- Planning and directing all contracted avian and aquatic laboratory and field studies.
- Interpreting and analyzing study results and preparing regulatory — compliance documentation.
- Preparing environmental risk assessments and compiling and disseminating technical information including overviews, MSDS's, product literature and study and program summaries.

Qualified candidates must possess a PhD in Environmental Toxicology or Ecology with at least 3 to 5 years of relevant experience.

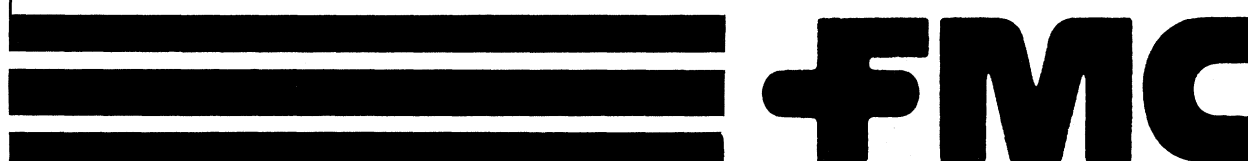
MAMMALIAN TOXICOLOGIST

This position would assist the Manager of Toxicology Programs with the following:

- Planning and directing sub-chronic and chronic toxicity programs.
- Interpreting and analyzing study results and supervising report preparation.
- Compiling and disseminating technical information including overviews, MSDS's, product literature and study and program summaries.

Qualified candidates should possess a MS/PhD Degree in Toxicology or a related field and several years in an industrial or contract research environment.

FMC offers an excellent salary, and a full range of benefits to include educational and relocation support. For highly visible and exciting careers with the Chemical R & D Group of a Fortune 150 company, send your resume with salary history/requirements to: **Personnel Manager, CPG, FMC CORPORATION, Chemical R & D Center, Box 8, Princeton, NJ 08543.** An Equal Opportunity Employer M/F.



POSITIONS OPEN

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (VPI&SU) PLANT MOLECULAR BIOLOGIST ASSISTANT PROFESSOR

This is a new tenure-track position to develop a research program to explore the use of RFLPs in constructing linkage maps and in developing selection methods and new tools for breeding agronomic crops. Active breeding programs in the department include wheat, soybeans, tobacco and turfgrasses. Teaching responsibilities will embrace aspects of plant molecular biology in relation to plant breeding.

Applicants should have a Ph.D. or postdoctoral experience in plant molecular biology or related fields, with a strong background in genetics, and training and experience in molecular cloning, chromosome mapping with DNA probes, DNA sequencing and other relevant techniques.

Salary will be commensurate with training and experience.

Applications will be accepted until 31 May 1988 or until a suitable applicant is identified, should that be at a later date.

Applicants should send a letter of application, a résumé (including transcripts), and the names and addresses of three references to:

Dr. R. Q. Cannell
Professor and Head
Department of Agronomy
VPI&SU
Blacksburg, VA 24061
Telephone: 703-961-6305

VPI&SU is an Equal Opportunity/Affirmative Action Employer.

Seeking **POSTDOCTORAL FELLOW** to work on studies involving the regulation and expression of neurotransmitter synthetic enzymes. Experience in molecular biology and biochemistry essential. Experience in tissue culture desirable. Projects focus on genomic transcriptional and translational regulation of neurotransmitter enzymes in vivo and in vitro. Funding available immediately. Send copy of curriculum vitae and three letters of reference to: **Dr. Dona Lee Wong, Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA 94305.** *Stanford is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are encouraged to apply.*

POSTDOCTORAL FELLOW/ASSOCIATE RESEARCHER. Position available to study regulation of expression and mechanism of action of mammalian peptidases using recombinant DNA. Competitive salary commensurate with experience. Send curriculum vitae and names of references to: **Dr. Louis Hersh, Biochemistry Department, Southwestern Graduate School, 5323 Harry Hines Boulevard, Dallas, TX 75235.** *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW MOLECULAR BIOLOGY

The Monsanto Company Biological Sciences Department, located in suburban St. Louis, has an immediate opening for a postdoctoral fellow. This position involves identification of gene products, specifically regulated by somatotropin. Candidates for this position must have a strong background in molecular biology, biochemistry or cell biology. Please send curriculum vitae and names of three references to: **Monsanto Company, 700 Chesterfield Village Parkway, Department BB5B-KG, Chesterfield, MO 63198.** *An Equal Opportunity Employer M/F/H/V.*

POSTDOCTORAL FELLOW MOLECULAR IMMUNOLOGY

Fellowship available spring/summer 1988 for studies of human immunogenetics emphasizing the structure and regulation of HLA genes. Qualifications: Experience in molecular biology highly desirable, with interests in human genetics, autoimmunity, gene regulation, recombination, or expression; M.D. or Ph.D. Highly interactive environment, affiliated with the University of Washington, focused on basic immunogenetics and clinical autoimmunity. Contact: **Gerald T. Nepom, M.D., Ph.D., Director, Immunology, Virginia Mason Research Center, 1000 Seneca Street, Seattle, WA 98101.** Telephone: 206-223-8812.

POSITIONS OPEN

POSTDOCTORAL FELLOW

To work in laboratory of **Lewis Cantley, Ph.D.**, Professor of Physiology on expression of oncogenes and various channels in *Xenopus* oocytes.

Please forward curriculum vitae and letters of reference to: **Dr. Cantley, Department of Physiology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

POSTDOCTORAL POSITION available to study the physical properties of proteins of the cytoskeleton, particularly actin and actin-binding proteins. The projects include the characteristics of the polymerization process, the viscoelastic nature of actin gels, the use of fluorescence photobleaching experiments, and the use of imaging techniques both in vitro and in vivo. Send curriculum vitae and names of three references to: **Dr. Carl Frieden, Department of Biochemistry, Washington University School of Medicine, Box 8094, St. Louis, MO 63110.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available in a laboratory studying development of immunogenic vaccines by genetic engineering. Send curriculum vitae and have three letters of reference sent to: **Dr. Stephen E. Wright, Department of Internal Medicine, Texas Tech University School of Medicine, 1400 Wallace Boulevard, Amarillo, TX 79106-1797.**

POSTDOCTORAL POSITION available immediately on an NIH training grant in immunology. Studies will concentrate on molecular immunology with emphasis on describing structural correlates of function of complement proteins by using site-directed mutagenesis. Applicant should have an M.D. or Ph.D. (or their equivalent). Previous training in protein chemistry and/or recombinant DNA techniques preferred. Salary contingent on previous experience. Please send cover letter, curriculum vitae, and names of three references to: **Dr. John Volanakis, Division of Clinical Immunology and Rheumatology, THT 437, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study glucocorticoid receptor-heat shock protein interaction. Project involves in vitro transcription and translation techniques. Experience in molecular biology desirable. Send curriculum vitae with names and addresses of three references to: **Dr. Clark W. Distelhorst, Department of Medicine, Case Western Reserve University (CWRU), Cleveland, OH 44106.** *CWRU is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

For an (extracellular) single-unit investigation of visual memory in the awake, behaving macaque. Experience in any of the following areas is desirable: electrophysiology, mathematical/statistical data analysis, behavior, visual/mnemonic physiology. Training will accrue in these same areas. Stipend is at NIH levels, with the position available as early as July, 1988. Send curriculum vitae and the names of three references to: **Dr. James Ringo, Department of Physiology, Box 642, University of Rochester Medical Center, Rochester, NY 14642.** *An Equal Opportunity Employer M/F.*

POSTDOCTORAL POSITION available immediately for research in molecular and cellular biology of apomictic *Pennisetum* species and interspecific hybrids. Particular emphasis will be placed on development of DNA probes for RFLP mapping. Techniques will include construction of genomic and cDNA libraries, in situ hybridization, and plant cell culture. Send curriculum vitae and names of three references to: **Dr. Peggy Ozias-Akins, Department of Horticulture, University of Georgia, Coastal Plain Experiment Station, P.O. Box 748, Tifton, GA 31793.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION is available to study the role of T-cell surface markers in T-cell activation. Background in cellular activation and immunology an advantage. Send curriculum vitae and names of three references to: **Dr. Julia L. Greenstein, Immunologic Pharmaceutical Corporation, One Kendall Square, Building 600, Cambridge, MA 02139.** *An Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available July 1988 for a Ph.D. in biochemistry or chemistry to investigate the molecular mechanism and metabolic consequences of drug oxidations by cytochrome P-450. Studies will involve determination of why some substrates require cytochrome b₅ for oxidation by cytochrome P-450. Send résumé and three letters of recommendation to:

Dr. Lucy Waskell (129)
VA Medical Center
University of California, San Francisco
4150 Clement Street
San Francisco, CA 94121

POSTDOCTORAL POSITION, Ph.D. (physiology, animal science, nutrition or related area) for work in NIH-funded study of the effects of parenteral nutrition on intestinal growth and development in neonatal swine. Experience in intestinal function (e.g., transport, morphology, enzyme analysis, etc.) and experience handling experimental animals is preferred. Send curriculum vitae and three letters of recommendation to: **Mark G. Clemens, Ph.D., Pediatric Surgical Laboratory, Department of Surgery, CMSC 7-116, Johns Hopkins University, School of Medicine, Baltimore, MD 21205.**

POSTDOCTORAL POSITION. A postdoctoral position is available immediately to investigate mechanisms of vascular smooth muscle control and their alteration by pregnancy. Special interest in catecholamine interaction. Experience with either Doppler, suspended isometric rings, or receptor binding technology a plus. Applicants should have a recent Ph.D. and a strong background in vascular physiology. Interested candidates should send curriculum vitae, two or three reprints of recent work, and the names of three references to: **Carl P. Weiner, M.D., Department of Obstetrics and Gynecology, University of Iowa College of Medicine, Iowa City, IA 52242.** Telephone: 319-356-2305. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for research on neural tissue transplants in mice using neuroendocrinological, pharmacological, behavioral and anatomical techniques. Send curriculum vitae and names of three references to: **Marie J. Gibson, Ph.D., Box 1055, Division of Endocrinology, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION for Ph.D. or M.D. to work on cell biology of (i) macromolecular transport across intestinal follicular epithelium or (ii) intestinal epithelial basement membrane synthesis. Experience in electron microscopy and immunocytochemistry desirable. Salary according to NRSA guidelines. U.S. citizenship or permanent residency status required. Send curriculum vitae and names of three references to: **Jerry S. Trier, M.D., Gastroenterology Division, Brigham & Women's Hospital, Harvard Medical School, 75 Francis Street, Boston, MA 02115.** *Equal Opportunity Employer.*

POSTDOCTORAL POSITION immediately available for Ph.D. molecular virologist to study B.V.D.-M.D. virus of cattle. Position for 1 year effective May 1988. The ideal candidate will have experience with molecular cloning and gene sequencing. Salary up to \$28,600 Canadian. *In accordance with Canadian immigration regulations, this notice is directed first to Canadian citizens and permanent residents.* Write to: **Dr. Arnost Cepica, Department of Pathology and Microbiology, Atlantic Veterinary College, University of Prince Edward Island, Canada, C1A 4P3.**

POSTDOCTORAL POSITION to study the DNA affinity binding of potential chemopreventive and anticoplastic drugs and their effect on covalent DNA adduction by carcinogens. A recent Ph.D. in chemistry or biochemistry is required, and previous experience in covalent and affinity DNA binding is preferred. Send curriculum vitae and three letters of reference to: **Dr. Barry Gold, Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, NE 68105.** *Equal Opportunity/Affirmative Action Employer.*



Exceptional Scientists. Extraordinary Challenges.

**The Immunobiology Research Institute Announces
Career Opportunities In Peptide Drug Research.**

Immunobiology Research Institute, a newly formed Johnson & Johnson Company, is offering a rare opportunity to grow with our organization. Our mission is to improve the quality of life for mankind through our dedication to peptide drug research. It is possible that our bright future could also be yours.

At our state-of-the-art facility located in central New Jersey, you will work alongside our distinguished scientists who have a proven track record of success in the research, development and approval of innovative breakthrough drug therapies. We invite qualified individuals to join us in one of the following areas:

PEPTIDE SYNTHESIS

We seek PhD's in Chemistry or Biochemistry with 2-6 years' experience with pharmaceuticals and in the design, synthesis, purification and characterization of peptides. Opportunities also exist for BS/MS Chemists with 2+ years' chemical synthesis experience.

PEPTIDE CHEMICAL DEVELOPMENT

You will be applying your PhD in Chemistry or Chemical Engineering and 2-5 years' process development experience to the methodology development for large scale peptide production. Experience with pilot plant scale-up or peptide chemistry is also desired.

ANALYTICAL & QUALITY ASSURANCE

We seek BS's, MS's and PhD's for opportunities in analytical chemistry. 2-5 years' experience in analytical methods development, stability studies and analytical support in the pharmaceutical industry is required.

PEPTIDE DRUG METABOLISM

Bioavailability

For this area, we require a BS/MS in Chemistry or Biochemistry and 4-7 years' experience in drug metabolism. Also, experience with ADME, bioavailability, pharmacokinetic studies, TLC, HPLC, radioisotope methodologies and tissue handling techniques is essential.

FORMULATIONS

Opportunities exist for individuals with a BS/MS/PhD in Pharmacy/Pharmacology and 2+ years' experience with solid and semi-solid formulations. Peptide formulations experience is highly desirable.

IMMUNOCHEMISTRY

A BS or MS in Biology or Cell Biology is necessary as is 3-5 years' experience in cellular immunology, immunochemistry, tissue culture and biochemistry.

In addition to a stimulating work environment, we offer highly competitive salaries and an outstanding Johnson & Johnson benefits program. For consideration, forward your credentials to:

**Director of Human Resources
Department S-2**

**IMMUNOBIOLOGY
RESEARCH INSTITUTE**

**P.O. Box 999
Annandale, NJ 08801**

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An Equal Opportunity
Employer m/f/h/v.

POSITIONS OPEN

POSTDOCTORAL POSITION YALE UNIVERSITY

A postdoctoral position is available immediately to join a multidisciplinary group studying a recently identified cloned peptide hormone. This peptide is produced by selected normal and malignant cells and has certain parathyroid hormone-like actions and a limited PTH-like sequence. The specific project will involve studying the control of the expression of this hormone in normal and malignant cells. A strong background in molecular biology is essential. The initial appointment is for 2 years, at a salary range geared to NIH guidelines and commensurate with experience. Applications should include curriculum vitae, bibliography, and the names and telephone numbers of three individuals familiar with the candidate's qualifications. Contact:

Dr. Arthur E. Broadus
Endocrine Section, Fitkin I
Department of Internal Medicine
Yale University
333 Cedar Street
New Haven, CT 06510

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION: IDENTIFICATION AND CHARACTERIZATION OF ONCOGENES

A fully funded postdoctoral position is available in the laboratory of **Dr. David Steffen**. Projects include the use of murine leukemia virus-induced lymphomas for the identification and isolation of novel oncogenes and the use of gene transfer to analyze the biochemical function of proto-oncogenes and oncogenes. Experience in the basic techniques of molecular biology is highly desirable. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **David Steffen, The Department of Cell Biology, Baylor College of Medicine, 1 Baylor Plaza, Houston, TX 77030.**

POSTDOCTORAL POSITION—MOLECULAR BIOLOGY OF HYPERTENSION. Requirements are Ph.D. or M.D. with experience in molecular-genetic techniques. Techniques to include cloning, RFLP studies, protein purification and sequencing. Salary negotiable. Submit curriculum vitae and statement of interest to: **William A. Pettinger, M.D., Professor, Department of Pharmacology, University of Texas Southwestern Medical Center, Dallas, TX 75235.**

Equal Opportunity/Affirmative Action Institution.

UNIVERSITY OF VIRGINIA CHARLOTTESVILLE POSTDOCTORAL POSITION PATHOLOGY/BIOCHEMISTRY

A postdoctoral position to study hormonal regulation of gene expression using calbindin-D_{9k} as a model system. Techniques include protein structure, gene sequencing, gene probing, cell culture, and monoclonal antibodies. Hormones involved are 1,25-dihydroxycholecalciferol, sex steroids and growth factors.

Background in molecular biology/biochemistry preferred. Send curriculum vitae, reprints, and three references to:

**M. Elizabeth Bruns, Ph.D., and
David E. Bruns, M.D.**
Departments of Pathology and Biochemistry,
Box 214
University of Virginia Medical School
Charlottesville, VA 22908

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS available immediately to study nicotinic acetylcholine receptor gene expression in the peripheral and central nervous systems. Experience in molecular biology is desirable but not required.

Send curriculum vitae and names of three references to:

Dr. Daniel Goldman
M.H.R.I. and Department of Biochemistry
University of Michigan
205 Washtenaw Place
Ann Arbor, MI 48109

POSITIONS OPEN

POSTDOCTORAL POSITION available to study blood flow using magnetic resonance imaging. Requirement: Ph.D. with experience in MRI, biofluid mechanics and Doppler laser anemometry, and familiarity with SAS. Please send curriculum vitae and three references to: **Dr. Panos P. Fatouros, Chairman, Radiation Physics Division, Box 72, MCV Station, Richmond, VA 23298-0072, by 22 April 1988. Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS available for structure/function studies of membrane transport proteins. An immediate project concerns the construction and expression of a synthetic gene of the mitochondrial phosphate transport protein and ADP/ATP carrier in *E. coli* for in vitro mutagenesis. Individuals with training in molecular biology and/or (membrane) protein biochemistry are invited to send their curriculum vitae and names of three references to: **Dr. Hartmut Wohlrab, Boston Biomedical Research Institute, 20 Staniford Street, Boston, MA 02114. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS available in the laboratories of **Drs. R. Desrosiers** and **Y. Li** for molecular genetic studies of simian immunodeficiency viruses. Research opportunities include: (i) genetic comparison of divergent SIV isolates; (ii) site-specific mutagenesis and recombination for study of molecular mechanisms of pathogenicity and cell tropism; (iii) approaches to AIDS vaccine development. Send curriculum vitae including publications and names of three references to: **Dr. Ronald Desrosiers, New England Regional Primate Research Center, Harvard Medical School, 1 Pine Hill Drive, Southboro, MA 01772.**

POSTDOCTORAL POSITIONS at the National Heart, Lung, and Blood Institute, National Institutes of Health, Public Health Service are available starting 1 July 1988 to study the biochemistry and physiology of the 70-kD class of heat-shock proteins in yeast. The focus of the laboratory is on the function of these proteins in the heat shock phenomenon, in translocating newly synthesized proteins through the endoplasmic reticulum, and in the uncoating of clathrin from coated vesicles during endocytosis. These positions have a salary range of \$20,000 to \$37,997 per annum depending on experience, and are located on the National Institutes of Health (NIH) campus in Bethesda, Maryland. Please send curriculum vitae and three letters of recommendation to: **Dr. Lois Greene, Laboratory of Cell Biology, National Heart, Lung, and Blood Institute, 9000 Rockville Pike, Building 3, Room B1-22, Bethesda, MD 20892. An Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS to study membrane-protein systems with objectives of describing interaction properties and/or role of membrane in enzyme activity and regulation. Areas under investigation include protein kinase C, the membrane attack complex of complement, and blood coagulation enzymes. Send curriculum vitae and three letters of reference to: **Dr. Gary Nelstuen, Department of Biochemistry, University of Minnesota, St. Paul, MN 55108. Telephone: 612-624-3622. The University of Minnesota is an Equal Opportunity Educator and Employer, and specifically invites applications from women and minorities.**

U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

POSTDOCTORAL RESEARCH ASSOCIATE (a research biochemist/physiologist/or cell biologist) immediately available to conduct basic research on the biochemistry and physiology of the surface membranes of the mammalian sperm cell. Project involves identification, isolation, and purification of specific membrane protein using biochemical, immunochemical, molecular biology and cell-sorting techniques. Candidate should have strong background in biochemistry and cell biology. Ph.D. required. Salary commensurate with experience (\$27,716 to \$33,218). Send applications (SF-171) and copy of curriculum vitae to: **Dr. L. A. Johnson, USDA, ARS, Building 200, Reproduction Laboratory, Beltsville, MD 20705 or call 301-344-2809. Applications should be marked 8E007. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS IN BIOTECHNOLOGY

Enzymology and molecular biology of lipid biosynthesis; mechanism of regulation of gene expression in specialized cells and tissues.

Send curriculum vitae and names of three references to: **P. E. Kolattukudy, Director, Biotechnology Center, Rightmire Hall, The Ohio State University, Columbus, OH 43210. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN MOLECULAR VIROLOGY available immediately. Topics include (i) structure/function relationships of viral polypeptides, (ii) studies on the replication of influenza virus, and (iii) viral etiology in the development of Type 1 Diabetes. Background in molecular biology and/or virology is desirable. Competitive salary, subsidized housing available. Send curriculum vitae and names of three references to: **Dr. Mark Krystal, Department of Microbiology, The Mount Sinai School of Medicine, Box 1124, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE training in molecular basis of prostate cancer development and metastasis. A position is available immediately at Columbia University, College of Physicians and Surgeons to define and molecularly clone the gene(s) involved in the development of prostate cancer in humans. Studies will employ DNA transfection and cotransfection procedures, cDNA cloning techniques, DNA sequencing, expression vector construction and gene expression studies. Experience in recombinant DNA techniques, nucleic acid biochemistry and/or tumor cell biology desirable. Send curriculum vitae and three letters of reference to: **Dr. P. B. Fisher, Departments of Pathology and Urology, Columbia University, College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately. Requires Ph.D. in biochemistry with research background and experience in purification and characterization of metal binding proteins and especially metallothionein. Experience in molecular biology is desirable but not required. Annual salary of \$18,750. Send curriculum vitae, statement of career goals, and three letters of recommendation by 15 May 1988 to: **Dr. Keith Myers, P.O. Box 94600, Lincoln, NE 68509.**

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately to study the molecular genetics of aging in *Drosophila*. Send curriculum vitae and names of three references to: **J. E. Fleming, Ryochi Sasakawa Laboratory for Aging Research, Linus Pauling Institute of Science and Medicine, 440 Page Mill Road, Palo Alto, CA 94306. Telephone: 415-327-4064.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately in fatty acid biochemistry. Background in arachidonic acid metabolism, prostaglandin biochemistry, omega-3 fatty acid metabolism, and GC/MS analysis desirable. Studies will include arachidonic acid and omega-3 fatty acid metabolism in platelets, vascular tissue and monocytes, and their relationship to thrombosis and atherosclerosis. Send curriculum vitae and names of three references to: **Victor A. Skrinsky, Ph.D., Cleveland Research Institute, 2351 East 22nd Street, Cleveland, OH 44115.**

POSTDOCTORAL RESEARCH ASSOCIATE—Position available, 1 May 1988 to study the medullary vasomotor center in rats. In vivo and in vitro neurophysiological and neuroanatomical approaches will be used. A background in experimental cardiovascular sciences and an interest in neuropharmacology are required. To apply, send complete curriculum vitae to: **Dr. Patrice G. Guyenet, Department of Pharmacology, University of Virginia School of Medicine, Box 448, Charlottesville, VA 22908. An Equal Opportunity/Affirmative Action Employer.**

CAREER OPPORTUNITIES IN CANCER RESEARCH AMERICAN HEALTH FOUNDATION

Several positions are available for **post-doctoral fellows, senior postdoctoral fellows, or associate research scientists** in divisions of the AMERICAN HEALTH FOUNDATION.

These openings offer the possibility of **development into permanent staff positions** for individuals who are interested in establishing **independent research programs** related to **cancer cause and prevention**.

Openings exist in the areas of:

- ... organic synthesis
- ... metabolic activation and DNA binding of carcinogens
- ... oncogene activation and related areas of molecular biology
- ... cancer chemoprevention
- ... nutritional biochemistry

Applicants should submit CV to:

Dr. Stephen S. Hecht
Director of Research
American Health Foundation
1 Dana Road
Valhalla, NY 10595

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

POST-DOCTORAL SCIENTIST MOLECULAR CARDIOLOGY

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The Sterling-Winthrop Research Institute announces an opening for a Post Doctoral Scientist in the Molecular Cardiology Department of its Drug Discovery Division. Our present research is directed to the etiology of human heart failure.

The successful candidate will have research experience in enzymology, protein separation and purification, monoclonal antibodies and additional immunochemical techniques. A Ph.D. in Biochemistry, Pharmacology or Cell Biology and 1-2 years of post doctoral experience is required. Good communication skills both oral and written are desirable.

Sterling-Winthrop Research Institute offers a competitive stipend and an opportunity for professional growth. We are located near Albany, New York which is a center for summer and winter recreational activities.

Interested candidates please send resume in confidence to:

William F. Sheldon
Employment Manager



STERLING-WINTHROP RESEARCH INSTITUTE

Sterling Research Group
A Division of Sterling Drug
Columbia Turnpike, Rensselaer, NY 12144
Equal Opportunity Employer M/F/H/V

TOXICOLOGISTS

Radian Corporation, a national leader in environmental consulting and health risk assessment, is seeking highly motivated individuals to join our expanding health risk assessment and toxicology services staffs in Los Angeles and Sacramento, CA. Entry and mid-level positions involve review of published toxicology data in the literature to analyze the environmental fate and potential human health impacts from exposures to toxic substances. These positions require a BS or MS in toxicology (or related field) and sound written/verbal communications skills. Computer experience is desirable. Senior positions involve directing health risk assessment projects and supporting our classical toxicology consulting services. These positions require a PhD in toxicology or a related field and a background in classical toxicology. Board certification preferred.

All of these positions offer excellent opportunities for professional growth as well as a competitive salary and benefits package. Send resume to:

RADIAN CORPORATION

James W. Embree, PhD, DABT
Senior Environmental Toxicologist
10395 Old Placerville Road
Sacramento, California 95827

An Equal Opportunity Employer

FERMENTATION MICROBIOLOGIST

Merck Chemical Manufacturing Division has a challenging opportunity available for a Fermentation Microbiologist in its Biotechnology laboratories. Responsibilities will include:

- Identifying and developing microorganisms and enzymes for bioprocessing applications.
- Optimizing fermentation conditions in present and future production operations.
- Conducting experimental programs at the bench and pilot-plant scale to support bioprocess development.

The successful candidate must have a PhD in Microbiology with 0-2 years of post-doctoral or related experience. A strong background in microbial physiology, genetics and molecular biology is required. Experience in strain improvement, protein engineering, fermentation optimization and statistical methods is highly desirable. Excellent communication skills and the ability to work independently are essential.

Located in the Shenandoah Valley, the Biotechnology laboratories are closely associated with large-scale bioprocessing facilities of Merck's Stonewall Plant in Elkton, Virginia.

Interested candidates should submit their resume with the names of three references and salary requirements to **Mr. Stephen Harris, Merck & Co., Inc., P.O. Box 7, Elkton, VA 22827**. Merck & Co. is an Equal Opportunity Employer.



Merck & Co., Inc.

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS DEPARTMENT OF RADIATION AND CELLULAR ONCOLOGY UNIVERSITY OF CHICAGO

Positions are available immediately to work in various areas of cytogenetics, molecular, and cellular biology.

Dr. Charles R. Ashman: Molecular analysis of gene mutations.

Dr. Janet M. Cowan: Cytogenetic and molecular studies of solid tumors.

Dr. Alan M. Diamond: Dominant/recessive oncogenes, mammalian repair genes.

Dr. Rudy O. Pozzatti: Molecular and genetic approaches to the study of metastasis.

Dr. Jeffrey L. Schwartz: DNA damage and repair in mammalian cells.

Dr. Ralph R. Weichselbaum: Molecular aspects of human genetic disorders, growth factors, and radiation resistance.

Interested individuals should send their curriculum vitae and names of persons to contact for references to:

Dr. J. Cowan, Department of Radiation and Cellular Oncology, Box 442, University of Chicago, Chicago, IL 60637.

POSTDOCTORAL/RESEARCH FELLOW position available immediately for Ph.D. or M.D. to study the molecular and cellular biology of Ca^{2+} -binding proteins. Experience in molecular biology or cell culture and protein purification would be advantageous. Please send curriculum vitae and names, addresses, and telephone numbers of three references to:

Dr. Thomas C. Südhof
Howard Hughes Medical Institute
Department of Molecular Genetics
UT Southwestern Medical Center
5323 Harry Hines Boulevard
Dallas, TX 75235-9050
Equal Opportunity Institutions.

POSITIONS OPEN

POSTDOCTORAL RESEARCH IN INSECT NEUROBIOLOGY—The Arizona Research Laboratories Division of Neurobiology (ARLDN), a research unit (8 faculty, 27 trainees and staff) devoted to cellular, developmental, and molecular neurobiology and neuroethology of insects, invites inquiries from potential postdoctoral trainees. Applicants should send resumé, statement of interests and future plans, and names and addresses of at least two faculty references. Write to: **Professor John G. Hildebrand, Director, ARL Division of Neurobiology, 611 Gould-Simpson Building, University of Arizona, Tucson, AZ 85721. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL TRAINEESHIP IN MATERNAL AND CHILD NUTRITION. Position is available immediately on an NIH training grant. Biomedical, epidemiological, and/or behavioral research projects can be developed on basic or applied topics that utilize animal models or human subjects living in the U.S. or in other countries. Applicants must be U.S. citizens or permanent residents and have completed the requirements for the doctoral degree in nutrition or other relevant field. Send curriculum vitae and names of three references to: **Dr. K. M. Rasmussen, Program Director, Savage Hall, Division of Nutritional Sciences, Cornell University, Ithaca, NY 14853-6301. Equal Opportunity Employer/Affirmative Action.**

PREDOCTORAL FELLOWSHIP IN NEUROBIOLOGY OF VISION

Available for 2 to 3 years to study synaptic transmission and modulation in a network of identified nonspiking interneurons in crustaceans. The project involves neurophysiological, immunocytochemical and neurochemical analysis. The salary scale is based upon the N.I.H. formula for postdoctorals. Send curriculum vitae and the names of three references to: **Raymon M. Glantz, Department of Biology, Rice University, P.O. Box 1892, Houston, TX 77251. Rice University is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

PROFESSOR OF MICROBIOLOGY AND MOLECULAR GENETICS—The Harvard Medical School invites applications for a full-time professor of microbiology and molecular genetics. The applicant should be an outstanding scientist with an exceptional reputation in the area of virus-cell interactions, primarily involving large DNA viruses. It is expected that the successful candidate will work at the interface of virology and cell biology to define various facets of cell structure, function or metabolism using viral probes. The successful candidate will be expected to lead a strong research program and to supervise junior faculty, graduate and medical students. Applicants should submit curriculum vitae and a statement of research interests to: **Dennis L. Kasper, M.D., Chairman, Microbiology Search Committee, Channing Laboratory, Harvard Medical School, 180 Longwood Avenue, Boston, MA 02115. Harvard Medical School is an Affirmative Action/Equal Opportunity Employer.**

PROFESSORSHIPS IN BIOLOGICAL X-RAY CRYSTALLOGRAPHY—The Harvard Medical School, Department of Biological Chemistry and Molecular Pharmacology and the Dana-Farber Cancer Institute are engaged in building a program in structural biology and invite applicants for two professorships in biological x-ray crystallography. Applicants should have an outstanding record of achievement in x-ray structural studies on proteins, nucleic acids, or supramolecular structures. We seek individuals with strong interdisciplinary interests to interact with current biochemistry and pharmacology faculty in Harvard Medical School and with faculty in the divisions of medicine, pediatrics, cell biology, tumor immunology, and cancer pharmacology at the Farber Institute. Interested candidates should send curriculum vitae to: **Professor Christopher Walsh, Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, 25 Shattuck Street, Boston, MA 02115. Harvard Medical School and The Dana Farber Cancer Institute are Affirmative Action/Equal Opportunity Employers.**

Cell Biology Research BS/MS

The Upjohn Company has several Associate position openings in our Pharmaceutical Research and Development Division. These positions offer a challenging research environment and the opportunity to interact with the scientific community at Upjohn.

CARDIOVASCULAR DISEASES RESEARCH: Position requires a B.S. or M.S. degree in Biochemistry, Cell Biology or related field, and several years of research experience utilizing biochemistry and/or molecular biology techniques. The research involves projects of endothelial cell biology, with particular emphasis on regulation of fibrinolysis. Experience in cell culture, protein purification and assay, and DNA/RNA hybridization is highly desirable.

ELECTRON MICROSCOPY: Successful candidate will have a B.S. or M.S. degree in the biological sciences and participate in studies of the intracellular pathways encountered by macromolecules and peptides. Current projects include studies on membrane trafficking within cultured epithelial and brain capillary endothelial cells by using monoclonal antibodies. Proficiency in all phases of transmission electron microscopy including quality ultramicrotomy

and darkroom skills is required. Experience with immunocytochemical and immunofluorescent methodology would be helpful.

MONOCLONAL ANTIBODY: This B.S. or M.S. level person will work independently on production and characterization of monoclonal antibodies to a variety of antigens, small molecules and proteins. Investigations will include development of new methodologies for hybrid production and assay development. Mammalian cell culture experience necessary. Small animal and assay development (RIA, ELISA, fluorescence, Western blotting) experience desirable.

Upjohn is located in Kalamazoo, a mid-sized community in southwestern Michigan midway between Chicago and Detroit. Our area offers varied cultural events, cosmopolitan shopping and entertainment, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers advancement opportunities, a highly competitive salary, comprehensive benefits and relocation assistance. For prompt, confidential consideration, call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application to be sent. Please refer to advertisement number 22000-A when calling. An Equal Opportunity Employer M/F.

**Our Commitment to Scientific
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Upjohn

Drug Metabolism Pharmacokinetics

Genentech, Inc., a leader in the field of biotechnology, is expanding its Drug Metabolism Pharmacokinetics area and currently seeking the following professionals.

Sr. Scientist Pharmacokinetics

Requires a Ph.D. and at least 6-10 years' experience. Preference given to candidates with some prior industry or biodisposition modeling experience.

Scientist Pharmacokinetics

Ph.D. and at least 2 years' academic postdoctoral training is required; some industry experience preferred.

Scientist Protein Chemistry/Cell Biology

Requires a Ph.D. and at least 2 years' postdoctoral training utilizing technology which is applicable to studies of protein metabolism/disposition.

Postdoctoral Researcher

Requires a Ph.D. in Protein Biochemistry or Cell Biology with an interest in protein metabolism and/or mechanisms of protein clearance from the plasma.

Research Associates

Positions require a BS or MS in Pharmacology, Biochemistry or Pharmaceutical Sciences as well as experience in analytical techniques of protein quantification, receptor-binding, pharmacokinetic analysis, or perfused organ techniques.

Genentech, Inc. offers an excellent salary and benefits package coupled with the opportunity to make a significant contribution to our organization. For consideration, send your resume to Eric R.B. Mankuta, Human Resources Department, Genentech, Inc., 460 Point San Bruno Blvd., South San Francisco, CA 94080. An equal opportunity employer.

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POSTDOCTORAL POSITION

Available June 1988 to study the role of cell-extra-cellular matrix interactions in differentiation and growth. Specifically, we wish to study the control of fibronectin, collagen and laminin receptor gene factors. We also wish to study the role of these receptors in tumor cell invasion of basement membranes and probe the mechanism of signal transduction elicited by these membrane spanning molecules. Applicants should have a Ph.D. in Biochemistry, or related discipline and experience in cell and molecular biological techniques.

Send curriculum vitae, a statement of research interest, and three letters of reference to:

Dr. Shoukat Dedhar
Department of Pathology
The University of British Columbia
c/o B.C. Cancer Control Research Centre
601 West 10th Avenue
Vancouver, B.C.
Canada V5Z 1L3

Biological Process Scientist

The Department of Biological Process Sciences at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking an associate research scientist interested in studying the impact of microbial physiology on the production of heterologous gene products.

The successful candidate will develop and evaluate new process control strategies to optimize microbial fermentations producing recombinant products in a state-of-the-art computer-controlled pilot plant. Candidates should have a B.S. in Chemical Engineering with coursework in process control, microbiology and biochemistry. Candidates with a B.S. in Microbiology will also be considered.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. For confidential consideration, please forward your resume and the names of three references to: Ms. Angela Varrichio, Associate Employment Administrator, V0019, SK&F Laboratories, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an equal opportunity employer, M/F/H/V.

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The University
of
British Columbia

BIOTECHNOLOGY LABORATORY

Graduate Student and Post-Doctoral Teaching Assistantships
in the Biotechnology Laboratory

The Biotechnology Laboratory, under the directorship of Dr. Michael Smith, is a new venture of the University of British Columbia. It is designed to build bridges in research and teaching in biotechnology between basic and applied sciences. Emphasis is on the use of molecular genetics to solve major problems in forest, plant, animal and human biology and infectious disease, on fermentation and process engineering applied to mammalian cell studies and on protein structure-function relationships.

Prospective graduate students should have undergraduate degrees in the life, physical or engineering sciences and prospective post-doctoral fellows should have graduate training in these areas.

Stipends will start at \$11,795 for graduate students and at \$19,860 for post-doctoral fellows. Positions will be available in September, 1988.

Submit applications **by May 31, 1988**, including curriculum vitae, complete academic transcripts and the names, addresses and phone numbers of three referees who are competent to evaluate your scientific potential to: **Mrs. Darlene Crowe, Supervisor, Administration, Biotechnology Laboratory, The University of British Columbia, #238-6174 University Boulevard, Vancouver, B.C., CANADA V6T 1W5.**

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

LUCILLE P. MARKEY SCHOLAR AWARDS IN BIOMEDICAL SCIENCE 1989

Nominations are invited for the 1989 Markey Scholar Awards which provide substantial support in post-doctoral years and in the first five years of faculty service. The fifth series of awards will be made for the twelve-month academic year beginning July 1, 1989.

A maximum of sixteen annual appointments will be made to individuals who hold a Ph.D., D.Sc., M.D./Ph.D., M.D., D.V.M. or D.D.S. degrees. Awards will provide both a stipend/salary and support for the Scholar's research. Nominations must be submitted by the institutions in which the nominees will be pursuing postdoctoral research training when the awards are initiated.

For further information and nomination procedure, please write:

Scholar Awards in Biomedical Science
Department 510
Lucille P. Markey Charitable Trust
3250 Mary Street, Suite 405
Miami, FL 33133



Deadline for nominations is October 3, 1988

Senior Staff Scientist

Beckman Instruments has an immediate opportunity for a self-motivated, business-oriented, visionary scientist to support the planning and development of reagents, chemistries and supplies for Molecular Biology and Biochemistry.

Responsibilities will include discovery of new product candidates and ideas within the SmithKline Beckman research organizations, technical liaison between contributing scientists and product development, and technical advisor for product and business planning and development.

This position requires a person with a Ph.D. in molecular biology or closely related field with experience in a firm serving the needs of molecular biologists or biochemists a definite plus. The ability to communicate effectively throughout the organization with both technical and non-technical disciplines is essential. Significant travel is required.

This position offers an excellent opportunity for professional recognition and a competitive compensation and benefit package. Please send your resume including salary history in confidence to: **Professional Employment D-30-A, Beckman Instruments Inc., 2500 N. Harbor Blvd., Fullerton, CA 92634-3100.** An equal opportunity employer. Principals only please.

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**ASSOCIATE DIRECTOR FOR
REFERRAL AND REVIEW**
Division of Research Grants
National Institutes of Health
Public Health Service
A Senior Executive Service Vacancy
Closing Date: May 6, 1988

The Division of Research Grants, National Institutes of Health (NIH), invites applications for the position of Associate Director for Referral and Review. The Division is responsible for the receipt of all Public Health Service (PHS) grant applications for research and research training, the scientific merit review of these applications and referral to appropriate PHS components. Candidates must meet the minimum educational requirements for Health Scientist Administrator, possess knowledge of and have experience with scientific merit review as practiced at the NIH, understand the biomedical research community, and have shown evidence of skill in the negotiation of sensitive issues in a scientific environment. In addition, applicants must have demonstrated leadership qualities, be experienced in establishing and maintaining relationships with key individuals and groups outside the organization, experience in directing and guiding programs and projects, experience in establishing procedures for budget development and allocating fiscal and personnel resources, developing processes and overseeing activities to assure the fair and equitable employment of qualified persons, and experience in the development and implementation of procedures for monitoring program performance. Send an Application for Federal Employment (SF-171), curriculum vitae, bibliography, and current performance appraisal to:

CHARLES McL. HADLEY III
PERSONNEL OFFICER
DIVISION OF RESEARCH GRANTS
NATIONAL INSTITUTES OF HEALTH
5333 WESTBARD AVENUE, ROOM 438
BETHESDA, MD 20892

All applications must be received by the closing date of May 6, 1988. Resumes alone are not acceptable applications for the Senior Executive Service.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

The Center for Laboratory Animal Sciences at this prominent 1112-bed New York City medical center is expanding its programs and is seeking qualified candidates for the position of Laboratory Animal Veterinarian. The successful

LABORATORY ANIMAL VETERINARIAN

**Center for Laboratory Animal Sciences
The Mount Sinai Medical Center**

candidate will perform health evaluations of animals, various diagnostic procedures of the clinical laboratory, and conduct research on diseases of laboratory animals. Emphasis will be placed on teaching and research which will be the major activities of this position.

An advanced degree (Ph.D.) and documented ability to conduct independent research are highly desirable.

Send resume to Dr. Shalev, Director, CLAS, Box 1264, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.

MOUNT SINAI

The Mount Sinai Medical Center of New York

United States Department of Agriculture

Postdoctoral Research Associates

The Agricultural Research Service as the principal scientific research agency of USDA, conducts research to produce more and better food and fiber; to control insect pests and weeds safely; to get food to consumers in better condition; to improve human nutrition; to help protect soil, water, and air, and to find new uses for agricultural commodities. Much of the work is on the cutting edge of each discipline—biotechnology (including molecular biology, genetic engineering, and membrane research), application of theories of artificial intelligence to computer technology, and innovative approaches to pest control through insect neurochemistry and the use of pheromones.

ARS is currently recruiting for 100 postdoctoral positions throughout the country. Opportunities exist in the following research areas:

- Genetics
- Biochemistry
- Chemistry
- Microbiology
- Animal Science
- Entomology
- Plant Physiology
- Plant Pathology
- Agronomy
- Soil Science
- Nutrition



Successful candidates will be hired under excepted appointments up to 2 years in duration. Salary for these GS-11/12 positions (\$27,716 to \$33,218) will be based on qualifications and experience.

For information on positions available and application procedures, write to:

N. L. BAKES
Personnel Division (S)
USDA/ARS/BARC-W
Bldg. 003, Room 101
Beltsville, MD 20705

ARS is an Equal Opportunity Employer. Women and Minorities are Encouraged to Apply.

POSITIONS OPEN

PSYCHOPHYSICIST

The Department of Ophthalmology, the Cullen Eye Institute, Baylor College of Medicine, is receiving inquiries for a faculty position as a psychophysicist. We seek a candidate who has strong clinical interests in human psychophysics and electrophysiology, including advanced ERG, EOG, VER, and other standard visual functions. Preference will be given to individuals who have an established independent research program and who wish to interact with both clinicians and animal electrophysiologists. Academic rank and salary will relate to qualifications. Please send a statement of research interests and curriculum vitae including a list of publications to: **Gunter K. von Noorden, M.D., Cullen Eye Institute, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. An Equal Opportunity Employer.**

QUALITY CONTROL SUPERVISOR

Ecogen Inc., Bucks County, Pennsylvania (suburban Philadelphia), has an immediate opening for a Quality Control Supervisor. Requires Ph.D./M.S. biochemist or microbiologist with excellent hands-on skills in immunoassay, gel electrophoresis, and other analytical techniques as well as good organizational ability to construct and supervise quality control group. Ecogen's products are microbial pesticides for agricultural markets. Interested candidates should submit a current résumé, including the names, addresses, and telephone numbers of three references to:

**Personnel Director
Ecogen Inc.
2005 Cabot Boulevard West
Langhorne, PA 19047-1810
Ecogen is an Equal Opportunity Employer.**

RESEARCH ASSISTANT PROFESSOR

Position pending. Cook College, the land-grant college of Rutgers University, invites applications for a tenure-track research assistant professorship in Shellfish Genetics/Breeding. Primary research responsibilities will include the development and improvement of stocks of commercially important shellfish. The successful applicant will be expected to have expertise with modern genetic approaches to stock improvement (e.g. molecular techniques, polyploidization, gynogenesis). Initial research efforts will focus on the maintenance, evaluation, and improvement of disease-resistant stocks of Delaware Bay oysters. The position will be based at Rutgers Shellfish Research Laboratory in Port Norris, NJ. Applicants should send their curriculum vitae and the names of at least three references by 9 May 1988 to: **Dr. Richard A. Lutz, Fisheries and Aquaculture Center, P.O. Box 231, Cook College, Rutgers University, New Brunswick, NJ 08903.**

Rutgers University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT PROFESSOR, Department of Medicine, Ph.D. in physiology or pharmacology with postdoctoral fellowship in renal physiology and/or experimental hypertension. Knowledge of radioimmunoassay, chromatography, receptor assays desired. Will develop/direct experimental animal laboratory. Send curriculum vitae and three references to: **John Bauer, M.D., Professor of Medicine, University of Missouri-Columbia, Columbia, MO 65212. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSISTANT PROFESSOR, MEDICINE. A position is available in the Division of Metabolism, Endocrinology and Nutrition, Department of Medicine at the University of Washington for a Ph.D. scientist in the field of molecular biology related to nutrition. Candidates should have at least 5 years of postdoctoral experience in molecular biology with a focus on nutrition and lipid metabolism related to atherosclerosis in humans and in animal models. Personal grant support and demonstrated ability to perform high quality, independent research is highly desirable. Submit curriculum vitae to: **Alan Chait, M.D., Department of Medicine, RG-26, University of Washington, Seattle, WA 98195. Deadline: 22 April 1988. University of Washington is an Equal Opportunity/Affirmative Action Employer. Women/minorities are encouraged to apply.**

POSITIONS OPEN

RESEARCH ASSOCIATE: For research in endocrinological manipulation of metabolism of eicosanoids and nucleotides in organ transplantation. HPLC, RIA, and cell culture experience desirable. Salary according to experience. Ph.D. required. Address inquiries to: **Dr. Peter W. Ramwell, Department of Physiology and Biophysics, George Washington University Medical Center, 3900 Reservoir Road NW, Washington, D.C. 20007.**

RESEARCH ASSOCIATE

Henry Ford Hospital, the Department of Pathology, invites applications for a postdoctoral level candidate (Ph.D. or M.D.) with the potential for advancement to permanent staff. Individual should possess interest and experience in: (i) molecular mechanisms in tumor-host interaction, (ii) role of oncogene and growth factor activation in cellular transformation, or (iii) structure/function of surface molecules in tumor cellular adhesion. Interested individuals should send curriculum vitae, research interests, and three references to: **John D. Crissman, M.D., Department of Pathology, Henry Ford Hospital, 2799 West Grand Boulevard, Detroit, MI 48202.**

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION for Ph.D. in cell-molecular biology/virology/related field. In laboratory studying genetic defects in purine metabolism that cause immune deficiency; influence of nucleoside metabolism and host cell factors on HIV replication, expression; metabolism/actions of antiretroviral nucleoside analogs. Send curriculum vitae, names of references to: **Dr. Michael Herschfield, Departments of Medicine and Biochemistry, Box 3049, Duke University Medical Center, Durham, NC 27710. Duke University is an Affirmative Action/Equal Opportunity Employer.**

LA TROBE UNIVERSITY AUSTRALIA SCHOOL OF BIOLOGICAL SCIENCES RESEARCH FELLOW

A position is available in the School of Biological Sciences for a research fellow in the area of cell and molecular biology. The project deals with the molecular mechanisms of tumor cell invasion. Preference will be given to candidates with a Ph.D. degree, and experience in one or more of the areas molecular biology, protein chemistry, and immunology. Further information may be obtained from: **Professor Roger Parish on Telephone: 613-479-2228.**

Closing date: 8 May 1988. Ref. No: ACA0/799. Salary: A\$28,381 to A\$37,122.

RESEARCH FELLOW

A position is available in the Botany Department for a research fellow in the area of cell and molecular biology. The project deals with the mechanisms of cell-cell interactions and their role in differentiation of the cellular slime mould, *Dictyostelium*. Preference will be given to candidates with a Ph.D. degree and experience in molecular biology and/or protein chemistry. Further information may be obtained from: **Professor Roger Parish on Telephone: 613-479-2228.**

Closing date: 8 May 1988. Ref. No: ACA0/800. Salary: A\$28,381 to A\$37,122.

Applications (marked confidential) including reference number, names of three referees, and curriculum vitae should be forwarded to: **The Staff Officer, La Trobe University, Bundoora, Victoria, Australia, 3083. Equal Opportunity is University Policy.**

RESEARCH POSITIONS: Positions available for Ph.D. or M.D. at the research fellow through assistant professor level in a research program on the expression and structure of genes involved in risk for and development of human colon cancer. Positions also provide opportunity to participate in Clinical Oncology Program for qualified individuals. Available immediately. Send curriculum vitae to: **Leonard Augenlicht, Ph.D., Director, Molecular Oncology Program, Department of Oncology, Albert Einstein Cancer Center, 111 East 210th Street, Bronx, NY 10467.**

POSITIONS OPEN

RESEARCH ASSOCIATE—IMMUNOPARASITOLOGY. Position available to study immunology of *Trypanosoma cruzi* infections in mice. Salary: \$20,000 to \$24,000. Send curriculum vitae and names of referees to: **Dr. R. E. Kuhn, Department of Biology, Wake Forest University, Winston-Salem, NC 27109.**

TWO RESEARCH ASSOCIATE POSITIONS. Available immediately. Ph.D. required. (i) To study integration of the polyoma viral genome into the host genome with emphasis on recognizing host features/structures which mediate integration; to map the integration sites at the chromosomal level by in situ hybridization; and to gain an understanding of the integration in relation to chromosome structure in the interphase nucleus. Experience in molecular biology or cytology, and/or genetics required. (ii) To study viral and host factors which control viral persistence and tumorigenesis in the mouse by polyoma virus and to determine and analyze the compartment of the immune response responsible for the protection against tumors in immunocompetent animals. Experience in viral immunology desired. Send curriculum vitae and list of references to: **Dr. M. M. Fluck, Department of Microbiology, Michigan State University, East Lansing, MI 48824-1101. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE—Department of Psychiatry, Emory University School of Medicine. Candidate must have Ph.D. in biological or chemical sciences, and extensive laboratory experience in the development and performance of radioimmunoassay and high pressure liquid chromatography with electrochemical detection. Substances to be assayed include neurotransmitters, neurotransmitter metabolites, hormones and peptides from plasma, cerebrospinal fluid and urine. This laboratory supports a multi-investigator clinical research unit studying the psychobiology of major psychiatric illnesses including depression, schizophrenia and panic disorders. Please send curriculum vitae and list of three references to: **Theresa C. Schrum, Emory University, Department of Psychiatry, P.O. Box AF, Atlanta, GA 30322. Affirmative Action/Equal Opportunity Employer.**

UNIVERSITY OF QUEENSLAND Equal Opportunity in Employment is University Policy SIX RESEARCH POSITIONS IN SENSORY NEUROSCIENCE VISION, TOUCH, AND HEARING RESEARCH CENTRE

The Vision, Touch and Hearing Research Centre is being established in new laboratories at the University of Queensland under the Directorship of **Professor J. D. Pettigrew FRS FAA**, with funding from the Commonwealth Special Research Centres Program. Applications are invited from scientists with postgraduate qualifications in sensory neuroscience and related subjects for appointment to six fixed-term research positions in laboratories headed by **Professor Pettigrew (Director), Dr. D. I. Vany (Vision), Dr. M. B. Calford (Somatosensation) and Dr. B. P. Oldfield (Audition).**

The Centre's interdisciplinary program addresses three basic themes of neurosensory research: transduction and central processing of sensory information; neuronal plasticity and its pharmacological modification; neuronal complexity and topographic organisation of local processing circuits. The Centre's laboratories will include fully equipped auditory and quantitative somatosensory suites, an anechoic chamber, isolated retina and brain slice labs, and a dedicated lab for voltage-sensitive dye image analysis. Service facilities will include histology and C1 biochemistry labs, a sterile surgery, an electronics and computing service, and advanced facilities for quantitative microscopy. In addition to research on standard laboratory species bred in an SPF facility, selective use is made of diverse Australian fauna, ranging from coral reef fish to flying foxes.

Appointments will be made at the level of research associate or research fellow, and will be until December 1990, with the possibility of 3 years renewal subject to Commonwealth funding. Inquiries should be addressed in the first instance to: **Professor Pettigrew at the Vision, Touch and Hearing Research Centre, Department of Physiology and Pharmacology, University of Queensland, St. Lucia, Queensland 4067, Australia.**

Salary: Research Associate \$A24,534 to \$A28,028 per annum. Research Fellow \$A28,380 to \$A37,122 per annum. Reference No: 13188.

POSITIONS OPEN

SENIOR RESEARCH ASSOCIATE

Director/Supervisor of facility for sequencing, synthesis and analysis of proteins and nucleic acids. Position includes supervision of technical personnel, interaction with faculty and other scientists of Biology Department at M.I.T., responsibility for operation of protein sequencer, amino acid analyzer, oligonucleotide and oligopeptide synthesizers. Prior experience should include research involving peptide sequencing and/or synthesis. We offer competitive salaries and excellent fringe benefits. Send curriculum vitae and three letters of support to: **Dr. Richard Hynes, Howard Hughes Medical Institute, Massachusetts Institute of Technology, Center for Cancer Research, 77 Massachusetts Avenue, Room E17-227B, Cambridge, MA 02139.**

Howard Hughes Medical Institute is an Equal Opportunity Employer.

The Seattle Biomedical Research Institute (SBRI) invites applications for a permanent position at the **STAFF OR SENIOR SCIENTIST** level. SBRI is a small, non-profit Institute dedicated to basic biomedical research in a cooperative, scientist-oriented environment. Interactions with other Seattle research institutions are encouraged. Current programs focus on basic molecular biology, immunology, and molecular and immunological parasitology. The successful candidate will establish an externally funded independent research program that is related to infectious diseases and that employs molecular and/or immunological approaches. Limited initial support from the Institute is available. Candidates interested in molecular pathogenesis of viral and bacterial disease or in intercellular interactions are encouraged to apply. Applicants should send their curriculum vitae, a brief statement of proposed research, and names of three references by 1 June 1988 to: **Dr. Kenneth Stuart, Seattle Biomedical Research Institute, 4 Nickerson Street, Seattle, WA 98109-1651. Equal Opportunity Employer.**

SYSTEMS ECOLOGIST. Corvallis Environmental Research Laboratory (USEPA), Corvallis, Oregon, anticipates availability of a position as a systems ecologist in the plant toxicology research team which is currently composed of plant physiologists, plant ecologists, microbial ecologists, and chemists. The position will focus on the evaluation of existing population, community, and ecosystem models plus the adaptation and development of hierarchical ecosystem level models which are suitable for use in assessing the ecological impact of stressors especially xenobiotic chemicals. Applicants should have Ph.D. degree or equivalent in ecology with experience in the development and use of terrestrial ecosystem models. Salary range, \$33,218 to \$43,181. Applicants should submit their curriculum vitae, including publications list and the names and addresses of at least three references, by 9 May 1988 to: **Jay D. Gile, U.S. Environmental Protection Agency, Corvallis Environmental Research Laboratory, 200 S.W. 35th Street, Corvallis, OR 97333. An Equal Opportunity/Affirmative Action Employer. Applicants must be U.S. citizens.**

TECHNICAL DIRECTOR

Director of asbestos information to serve as technical director of Asbestos Abatement Council (AAC). Requirements include: technical/scientific background; excellent written and verbal skills to assist in newsletter and magazine; training proficiencies; asbestos knowledge required; computer capability helpful. Six years of professional experience required. Salary \$34,000 to \$42,000. Send résumé to: **AAC, 25 K Street, NE, Washington, DC 20002. Attention: Technical Director Search.** No calls please.

TECHNICIANS

Biophor Corporation, a new biotechnology company, located at the Texas A&M University Research Park, is now hiring technicians with experience in basic biochemical-immunochemical, analytical methods. Applicants with a B.S./M.S.C. degree preferred. Industrial experience is an advantage. Please send résumé and the names of at least two references to:

**Biophor Corporation
Personnel Department
100 Research Parkway, Suite 150
Texas A&M University Research Park
College Station, TX 77840.**

RESEARCH SCIENTISTS

CAREER OPPORTUNITIES IN AGRICULTURAL BIOTECHNOLOGY

The Biotechnology Laboratory of **EniChem Americas, Inc.** has several positions available for Scientists at our Research and Development Center near Princeton, N.J. These vacancies present a unique opportunity to join a group of highly motivated researchers developing programs on crop improvement through biotechnology.

PEPTIDE CHEMIST

Work with a team of Biochemists and Biologists in the design and synthesis of physiologically active peptides related to plant improvement. A Ph.D. in Organic, Peptide or Biochemistry and 1-4 years of postdoctoral or industrial experience in solid phase peptide synthesis and peptide isolation and purification is required. Experience with high field NMR techniques is desirable.

ORGANIC CHEMIST

Synthesize and study enzyme inhibitors. A Ph.D. in Organic Chemistry with 1-4 years of postdoctoral or industrial experience is required. Hands on experience with NMR, IR and UV as well as with either HPLC or GC techniques is also required. A working knowledge of enzyme kinetics and other biochemical techniques is beneficial.

BIOCHEMISTS or PLANT PHYSIOLOGISTS

Openings exist at the BS, MS and Ph.D. levels for candidates with expertise in Plant and Membrane Biochemistry or Whole Plant Physiology.

ANALYTICAL BIOCHEMISTS or MOLECULAR BIOLOGISTS

BS or MS level scientists with experience in at least one of the following areas: Analytical Chemistry of nucleotides, peptides or proteins, particularly by HPLC or FPLC, synthesis and purification of oligonucleotides, or molecular cloning techniques.

Successful candidates will enjoy the benefits of joining a new research team in a well-equipped, custom designed facility. **EniChem Americas, Inc.** is the American affiliate of **EniChem**, the chemical arm of **ENI (Ente Nazionale Idrocarburi)**. **EniChem** offers competitive starting salaries as well as an excellent benefits package.

If interested, please submit your Curriculum Vitae in confidence to:

Personnel Coordinator

EniChem Americas, Inc.

Research and Development Center

2000 Princeton Park Corporate Center
Monmouth Junction, New Jersey 08852

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POSITIONS OPEN

SENIOR ENVIRONMENTAL HAZARDS SCIENTIST. The California Department of Food and Agriculture will hold a competitive exam for senior scientist (staff and supervisory) in the Environmental Monitoring and Pest Management Branch (Sacramento). Starting salary \$38,772. Excellent benefits. Minimum qualifications: Two years of research experience after a master's degree, plus a Ph.D. in chemistry, biological sciences, environmental sciences, biochemistry, earth sciences, toxicology, meteorology, physics, statistics, computer science, mathematics, or related agricultural science. Desirable qualifications: (i) Technical expertise in environmental chemistry, and research experience in environmental pesticide residue monitoring and in experimental design, or (ii) supervisory expertise in environmental sciences, an ability to coordinate the work of the program with other units, programs or agencies, and an ability to manage program budgeting and develop program policies. Exam final filing date: 6 May 1988. For an exam application, contact: **John Sanders or Kathy Brunetti, California Department of Food and Agriculture, 1220 N Street, A-149, P.O. Box 942871, Sacramento, CA 94271-0001. Telephone: 916-324-8916.**

SENIOR RESEARCH ASSISTANT

Senior research assistant needed to carry out experiments in the area of biochemistry and also be responsible for overall laboratory organization. Experience in tissue culture is desirable and familiarity with techniques for purification and characterization of enzymes is important. B.A. or B.S. in biology or chemistry, 2 years of post-college laboratory experience and excellent organizational skills are required. Please send résumé with two to three references to: **Senior Research Assistant Search, Department of Molecular Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF PHYSICAL THERAPY FACULTY OF REHABILITATION MEDICINE UNIVERSITY OF ALBERTA

Applications are invited for two full-time **TENURE-TRACK APPOINTMENTS** in the Department of Physical Therapy, for 1 July 1988. The University of Alberta offers B.Sc. and M.Sc. degrees in physical therapy. Qualified candidates must possess a doctoral degree. A physical therapy background would be an asset. Salary will be commensurate with qualifications and experience. (Assistant professor range: \$31,612 to \$45,340; Associate professor range: \$39,620 to \$57,236.)

Responsibilities include undergraduate and graduate teaching, research and scholarly work, and administrative duties. A strong clinical background would be an asset. In addition, undergraduate and graduate teaching in cardiac/pulmonary physiotherapy is required for one of these positions.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The deadline for receipt of applications is 15 May 1988.

Qualified applicants should send curriculum vitae, state their teaching and research interests, together with the names of three references to:

**Dr. Martha C. Piper, Dean
Faculty of Rehabilitation Medicine
316 Corbett Hall
University of Alberta
Edmonton, Alberta, Canada
T6G 2G4**

The University of Alberta is committed to the principle of Equity in Employment.

TISSUE CULTURE TECHNICIAN

Technician needed who will be responsible for cell culture work, maintaining stocks, preparation of subcellular fractions, ultracentrifugation, etc. Tissue culture experience is required. Please send résumé with two to three references to: **Tissue Culture Technician Search, Department of Molecular Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

VETERINARIAN/ANIMAL CARE FACILITY ADMINISTRATOR.—The Department of Biology at West Chester University is seeking a veterinarian for a tenure-track research/teaching position with additional responsibility as an animal care facility administrator. Teaching competency is expected in areas of anatomy, physiology, parasitology, and general biology. The applicant is expected to pursue a vigorous research program. D.V.M. with current license is required and 1 year of college teaching experience is desirable. Expected availability, September 1988. Please submit curriculum vitae, undergraduate, and graduate transcripts, and three letters of recommendation postmarked by 6 May 1988 to: **Dr. Maureen Knabb, Chair, Search Committee, Department of Biology, West Chester University, West Chester, PA 19383. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.**

VISION SCIENCE. TENURED OR TENURE-TRACK POSITION available immediately to join strong research-oriented group of vision scientists. Applicants must have active research programs and willingness to participate in teaching courses in ocular physiology and pharmacology to optometry students, Ph.D. required. Rank and salary dependent upon qualifications. This is an additional position to the one previously advertised. Send letter of application, including statement of research interests, curriculum vitae, and names of three individuals willing to provide letters of reference to: **Dean Jerry L. Christensen, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121. Women and minorities are encouraged to apply. An Equal Opportunity Employer. Deadline: 6 May 1988.**

PROGRAM

SHANNON POINT MARINE CENTER (SPMC)

WESTERN WASHINGTON UNIVERSITY

UNDERGRADUATE RESEARCH PROGRAM. SPMC has been designated by the National Science Foundation as a **RESEARCH EXPERIENCES FOR UNDERGRADUATES SITE** for the summer of 1988. We invite applications from undergraduates interested in independent research projects on life history studies of Puget Sound crabs. Participants will receive a \$2000 stipend plus on-campus housing for the nine-week program (20 June to 20 August 1988). *Applications from women and members of minority groups encouraged.* Applications should include letter describing background and interests in pursuing research experience, undergraduate transcript, and one reference submitted by 25 April 1988. Applications and requests for further information should be addressed to: **Dr. Stephen D. Sulkin, Professor and Director, Shannon Point Marine Center, 1900 Shannon Point Road, Anacortes, WA 98221.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN IMMUNOLOGY

The Irvington Institute for Medical Research will award ten postdoctoral fellowships in basic immunologic research for 3 years of study at a hospital or laboratory in the United States, beginning 1 July 1989. Applicants holding M.D.s, Ph.D.s, and M.D./Ph.D.s are encouraged to apply. Those applicants having no more than 3 years of previous postdoctoral experience will receive priority. Successful candidates will receive an incremental stipend of \$22,000, \$24,000, and \$26,000 for years 1, 2, and 3. \$2,000 annual overhead allowance to host institution. Write or telephone for applications: **The Irvington Institute for Medical Research, 120 East 56 Street, Room 330, New York, NY 10022. Telephone: 212-758-8250. Applications are due 15 August 1988.**

POSTDOCTORAL RESEARCH FELLOWSHIP. Positions are available immediately at postdoctoral levels in the areas of: (i) regulation of cytoskeletal gene expression, (ii) growth and regulation of hemopoietic stem cells, and (iii) oxidant-induced tissue injury. Send curriculum vitae and inquiry to: **Min-Fu Tsan, M.D., Ph.D., Associate Chief of Staff for Research, Research Service (151), VA Medical Center, Albany, NY 12208.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP, July 1988, for applicant with Ph.D. and experience in peptide chemistry, sequencing, synthesis and preparation of antibodies to synthetic peptides. Projects include studies of glomerular matrix proteins (**D. H. Lovett**) and the Na/H antiporter (**D. G. Warnock**). Send curriculum vitae and names of three references to: **D. G. Warnock, M.D., University of California Medical Service, Nephrology Service (111J), VA Medical Center, 4150 Clement Street, San Francisco, CA 94121. University of California is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP: A position is available for research in pediatric brain biochemistry using magnetic resonance spectroscopy (MRS). Training in MRS will be used to understand the genesis of brain damage by investigating the effects of ischemia and asphyxia on the neonatal brain using animal and human subjects. Opportunity is provided to apply P-31, H-1 and C-13 MRS for in vitro study. There will be close collaboration with the Department of Pediatrics. A background in biochemistry and/or neurochemistry is desirable. Facilities include 2 Telsa/meter bore, 4.7 Tesla/40 cm bore imaging and spectroscopy units and computer resources. Send curriculum vitae and three letters of reference to: **Ray L. Nunnally, Ph.D., Biomedical Magnetic Resonance Center, Department of Radiology, University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9071. An Equal Opportunity University.**

TWO POSTDOCTORAL FELLOWSHIPS in virology/molecular biology available to study (i) the molecular interaction of retroviruses and a togavirus causing motor neuron disease in mice and (ii) purification and molecular characterization of nucleoside/nucleobase transporters of mammalian cells. Send curriculum vitae and three letters of recommendation to: **Dr. Peter Plagemann, Microbiology, Box 196 UMHC, University of Minnesota, Minneapolis, MN 55455. The University of Minnesota is an Equal Opportunity Employer and educator and specifically invites applications from women and minorities.**

THE MARY GIBSON HENRY FELLOWSHIP. The Henry Foundation announces the Mary Gibson Fellowship for botanical research preferable to be done on native plants. The fellowship is open to predoctoral or postdoctoral students. Predoctoral fellowship is 3 years, with yearly review. Postdoctoral fellowship is 2 years with potential extra year. Facilities available for field and laboratory experiments. Predoctoral students may obtain their degree at university of choice. Preference given to students carrying out a large amount of research at the Henry Foundation. Stipend for predoctoral students is \$10,000 plus tuition and living facilities. Postdoctoral fellowship is \$22,000 plus living facilities. Closing date: 15 June 1988. Awards of fellowship will be by 15 July 1988. Submit applications to: **Dr. Ruth Patrick, The Henry Foundation for Botanical Research, Box 7, Gladwyne, PA 19035.**

MARKETPLACE

COLLECTED PERSPECTIVES IN CANCER RESEARCH: 1986-1987

Cancer Research announces the latest compilation of articles from its acclaimed "Perspectives" series. Oncogenes, retroviruses, growth factors, natural killer cells and breast cancer treatment are among topics examined by leading cancer authorities. Order copies from **Subscription Fulfillment Dept., Waverly Press, Inc., P.O. Box 64473, Baltimore, MD 21264-0473. Price (payable in US currency), \$9/copy (\$11 outside US).**

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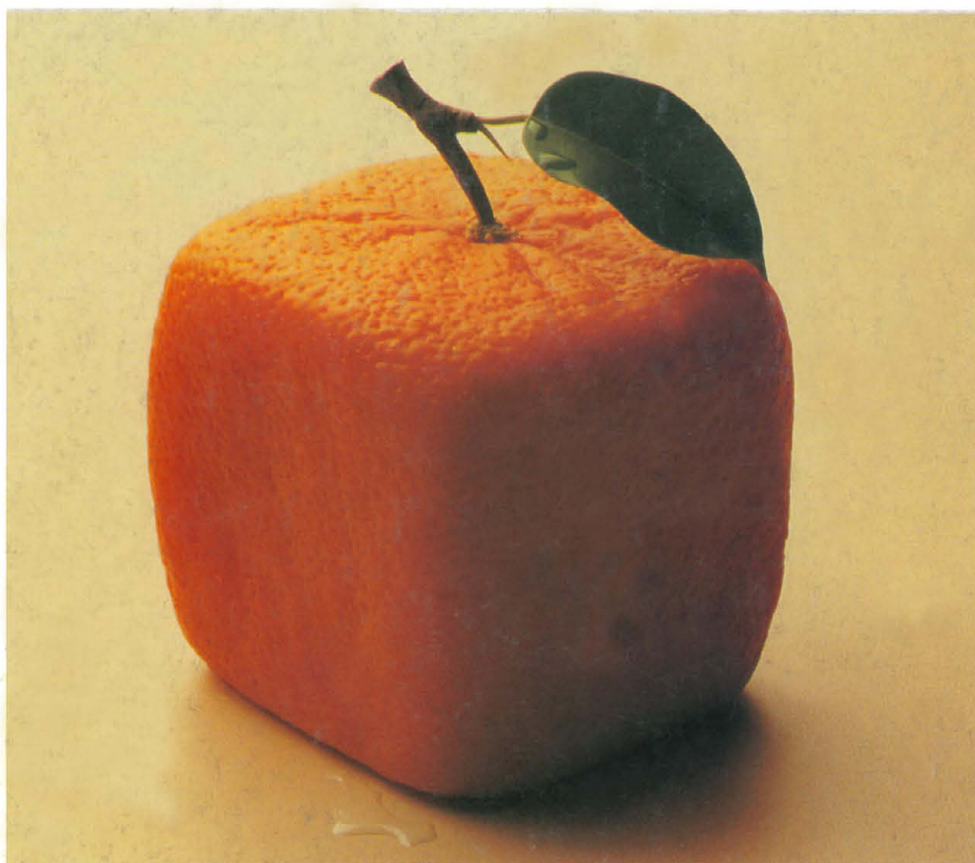
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