

ings—namely, the tendency of life to produce more complex and higher organization and the influence of circumstances explaining the branching of the phylogenetic tree—these are only two aspects of a single cause, the mechanical or hydrodynamic action of internal fluids producing organizational diversity and complexity. Lamarck's terminological uncertainties, mirroring attempts at finding the proper expository strategy, would have misled most historians. However, Corsi admits that “the ambiguity of the expressions that the author used to summarize his own doctrine were to be accentuated” in later years. Indeed, Lamarck's *Philosophie zoologique* of 1809 and the *Histoire naturelle des animaux sans vertèbres* of 1815 do emphasize the existence of a dual mechanism: it is the inner drive of life that accounts for the traces we find of an ascending series of animals, a series that has been distorted by the branching effects of the action of circumstances. It seems difficult to maintain that we have here only a terminological artifact; one may wonder whether Corsi is not trying to introduce a consistency that Lamarck never achieved or even aimed at.

Be that as it may, in his broad and careful examination of the relevant texts of Lamarck and of his contemporaries, Corsi has set an exacting standard for Lamarckian scholarship.

This may not be the definitive book on Lamarck; but there could be no such book. Lamarck was far from being a consistently lucid writer; he will probably remain up to a point intractable, in part because of the lack of manuscript sources and in part because of the palimpsest nature of his writings. Lamarck often reused whole segments of previous works and incorporated them word for word in new contexts, not always with perfect fit; and it is likely that there are in his works many such segments whose absent former contexts we will never know anything about.

This is not to say, however, that the study of Lamarck is a futile enterprise. There is much that we ought to consider firmly established, and with *The Age of Lamarck* Corsi has contributed to that body of knowledge outstandingly. Indeed, because of its scope, its thoroughness, and the wealth of challenging new interpretations it offers, I see this book as a turning point in the interpretation of Lamarck in his historical context.

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The Sociobiology of Plants

Plant Reproductive Ecology. Patterns and Strategies. JON LOVETT DOUST and LESLEY LOVETT DOUST, Eds. Oxford University Press, New York, 1988. xiv, 344 pp., illus. \$49.95.

A volume on plant reproductive ecology has a great deal of material to cover. Included are life history strategies, competition, dispersal, pollination, and herbivory, topics that are each large enough in themselves to merit substantial review volumes. Each of these topics receives some treatment in the 15 reviews that constitute *Plant Reproductive Ecology*, but the most distinctive feature of the volume is the amount of attention given to the nascent field of plant sociobiology.

Sociobiology has come relatively slowly to the plant kingdom. That there could even be a field of plant sociobiology may come as a surprise to the uninitiated. Sociobiology is the discipline that studies the evolution of social interactions, and we do not usually think of plants as highly social organisms. There are, however, a number of ways in which a sociobiological perspective can be helpful. If plants must divide their effort or their time between being male and being female, then we might expect to gain some insights from the game models of sexual allocation theory. If plants compete for mates, or if plants do not raise the progeny of all pollen contributors at random, then sexual selection theory would seem to be relevant. If plants must allocate limited resources among seeds, with each seed potentially exerting some influence on the allocation, then kin selection theory leads us to expect conflict between the parent and its offspring.

All of this implies that botanists have something to gain from the sociobiological perspective, and this book could be recommended for this reason alone. But the gain is not one-sided, with sociobiologists doing the teaching and botanists the learning. Indeed, the gain to sociobiologists is more than simply having a few examples from the plant world to fill out their undergraduate lectures. Plants differ in profound ways from the animals, primarily vertebrates and insects, around which sociobiological theory developed. One need only reflect on how plants get their gametes together to appreciate how different their social lives are from our own. In addition, they are autotrophic, their growth tends to be modular, with considerable vegetative reproduction, and they do not sequester germ lines early in development. These differences and others have consequences for social evolution, and as a result plants present interesting new problems for sociobiologists to consider.

For example, while we can use sexual allocation theory to predict how hermaphroditic plants should allocate resources to male and female functions, how are we to include investment in flowers, which presumably function in both male and female reproduction? With respect to sexual selection, much of what might be called mate choice in plants occurs by abortion of seeds, and choosing on the basis of embryo traits may be very different from choosing on the basis of male traits. Finally, when seeds compete for resources from the maternal plant, the process is not necessarily a simple analogue of parent-offspring contests in animals. Seeds may include not only maternal and embryonic tissue but also the haploid gametophyte and the (usually) triploid endosperm. This makes the inclusive fitness situation more confusing but also much richer. Even these differences have to do primarily with the more familiar flowering plants, and additional differences appear in algae, bryophytes, and pteridophytes, covered in the last three chapters of this book.

Among previous books, those most similar to this one in ground covered are Mary Willson's *Plant Reproductive Ecology* and (with Nancy Burley) *Mate Choice in Plants*. In comparison, the present volume has both the advantage and the disadvantage of having many authors; it gains diversity of viewpoint at the expense of singularity of purpose and tightness of organization. It also has the advantage of five extra years of coverage, and in this new and growing field five years is significant. As was not the case when Willson wrote, the authors of this volume can write for a fairly large group of colleagues familiar with both plants and sociobiology. This may make it somewhat more difficult for outsiders. Botanists with little background in sociobiology will not always find the theories explained in sufficient detail, but references to the primary literature are provided. Similarly, those coming from the other side may have to devote some effort to keeping straight the welter of botanical terms. But, despite the costs, both botanists and sociobiologists should appreciate that cross-fertilization has advantages, not only in plants but also in science.

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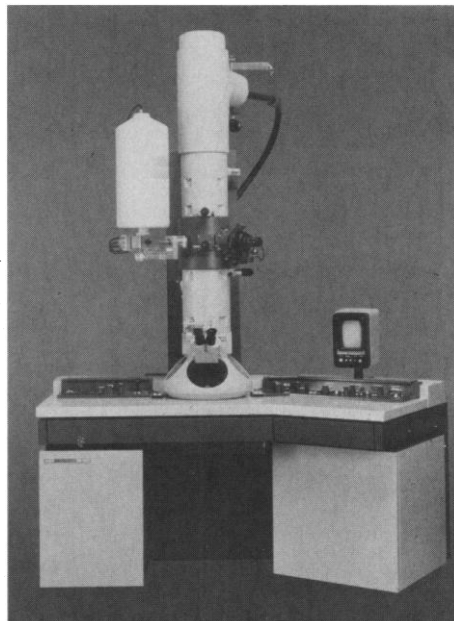
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Literature

Teaching and Research Applications for Biological and Medical Sciences is a catalog of IBM PC software for the life sciences. IRL Press Software. Circle 436.

The *Monomer/Polymer Catalog* lists monomers, polymers, catalysts, ultraviolet initiators, and molecular weight standards. Poly-science. Circle 438.

Going to Great Lengths in Chromosome Analysis is a brochure that describes the Pulsewave System, which resolves DNA fragments and chromosome-size DNA from 20 to 2000 kilobase pairs. Bio-Rad Laboratories, Chemical Division. Circle 439.

The *HPLC Product Guide* describes a line of isocratic and gradient high-performance liquid chromatography (HPLC) systems. Pharmacia LKB Biotechnology. Circle 457.

The *Restriction Enzyme Wall Chart* is a 81-by 130-cm poster that features the physical characteristics of 52 restriction enzymes. International Biotechnologies. Circle 458.

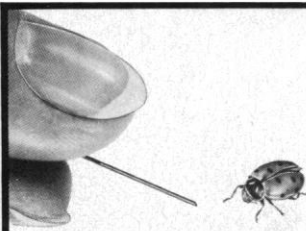
Versalab is an 8-page brochure about modular wood and metal laboratory workstations. Kewaunee Scientific. Circle 460.

The brochure *To Scan or Not to Scan* features a line of spectrophotometers, some with scanning capabilities. Milton Roy. Circle 571.

Chiral Separations is a brochure about a fluorescent reagent for resolving chiral amino acids, amines, and alcohols by diastereomer formation and high-performance liquid chromatography. Eka Nobel (Sweden). Circle 572.

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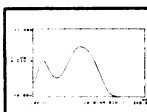
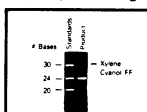
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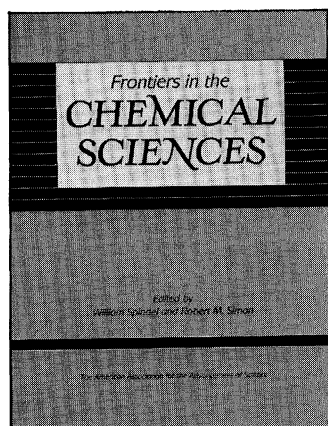
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POSITIONS WANTED

Anatomist, Ph.D. Nine years of experience teaching gross anatomy, histology and neuroanatomy to medical students. Prior teaching at undergraduate level. Seeks teaching position at medical school or university. Box 196, **SCIENCE**.

Clinical Biochemist-Toxicologist, Ph.D., Biochemistry, 1974. Wants position as laboratory director or equivalent. Qualified by CAP, CLIA, Medicare, NIDA as director. Will act as consultant to companies needing drug testing. Please send inquiries to Box 9, **SCIENCE**.

Immunologist, M.D. Established investigator. Academic research training in autoimmunity, cellular immunology, immunogenetics. Extensive publication in autoimmune diseases. Interested in developing specific therapeutics for autoimmune diseases. Senior scientist/scientific director position in industry. Box 5, **SCIENCE**.

POSITIONS WANTED

Accredited Clinical Polysomnographer (Sleep Disorders Expert)/Sleep and Biological Rhythms Researcher, Ph.D. seeks a clinical, teaching or research position. Eleven years of experience in all phases of Sleep Disorder Center set-up and operation. Extensive experience and research with noninvasive clinical neurophysiological techniques including polysomnography, pupillometry, event-related potentials, brain electrical activity mapping and EEG analysis. Box 8, **SCIENCE**.

Japanese Life Sciences Translations: articles, patents, opposition statements, other documents translated from Japanese in cell biology, microbiology, mycology, plant pathology, immunology, pharmacology, and related fields. 1025 Laurel Street #3, Menlo Park, CA 94025. Telephone: 415-321-6317.

Medical Computer Specialist, M.D. Board-certified with 15 years of primary care clinical experience in hospital and ambulatory settings. Areas of interest include enhancement of health care productivity, quality assessment, database utilization and application. Seeks industry, government, or academic position in research, management consulting, or teaching. Prefer Arizona, Southwest. Box 187, **SCIENCE**.

POSITIONS OPEN

ACADEMIC POSITION IN PATHOLOGY.

Medical school, full-time, position to teach pathology to sophomore medical students and participate in advanced courses to graduate students. M.D. or Ph.D. acquired in a medical school setting is required. Teaching experience in pathology to medical students, postdoctoral research or clinical experience is highly desirable. Rank and salary negotiable, depending on qualifications and experience. Starting date: 1 July 1989. Send curriculum vitae and three letters of recommendation to: **Dr. Panayotis G. Iatridis, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, IN 46408.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

ANIMAL PHYSIOLOGIST. Assistant professor, tenure-track, beginning August 1989; teach two courses per semester with laboratories; animal physiology, comparative vertebrate anatomy, human anatomy, another course for majors or non-majors; supervise undergraduate research; advise. Ph.D. required. Seton Hill College is a Catholic liberal arts college for women, 35 miles east of Pittsburgh. By 3 February 1989, send three letters of recommendation, statement of teaching and research goals, equipment needs, curriculum vitae, and transcripts to: **Sister Bernadette Fondy, Ph.D., Department of Biology, Seton Hill College, Greensburg, PA 15601.** *An Equal Opportunity/Affirmative Action Institution.*

ASSISTANT PROFESSOR, PATHOBIOLOGY—BROWN UNIVERSITY

The Department of Pathology and Laboratory Medicine at Brown University is seeking an experimental pathologist for a campus-based tenure-track position as assistant professor of medical science. The successful candidate is expected to develop an independent research program, supported by external funds, involving the study of basic mechanisms of disease pathogenesis. Teaching duties involve participation in courses of general or systemic pathology to medical students, and training and advising undergraduate and graduate students. Candidates should have an M.D., D.V.M. and/or Ph.D. degree and a minimum of 2 years of postdoctoral or residency research training in pathobiology. Preference will be given to candidates with an M.D. degree with research experience in an area related to molecular pathology. Opportunities for the practice of pathology on a part-time basis are available at the Brown University affiliated hospitals for suitable candidates.

Send curriculum vitae, recent reprints, a description of career objectives and research plans, and three letters of reference to: **Dr. Nelson Fausto, Chair, Department of Pathology and Laboratory Medicine, Division of Biology and Medicine, Brown University, Providence, RI 02912.** *We encourage applications from women and minority candidates. Brown University is an Equal Opportunity/Affirmative Action Employer. Deadline: 15 March 1989.*

POSITIONS OPEN

The Department of Chemistry and Biochemistry at Concordia University, Montreal, has an opening for a tenure-track appointment at the rank of **ASSISTANT PROFESSOR IN BIOCHEMISTRY** to commence in September 1989. The Department has strong research interests at the interface of chemistry and biology in bioinorganic, bioorganic and biophysical chemistry. We are seeking an outstanding candidate with research interests in areas of basic biochemistry, such as: enzymology, metabolism or membrane enzymes, that will complement our existing interests. The successful applicant will have a Ph.D. and postdoctoral experience, will be required to establish a vigorous research program that will attract external funding, and teach biochemistry effectively at the undergraduate and graduate levels. Start-up assistance will be available from the University, while external funds are available from Quebec and federally from the Natural Sciences and Engineering Research Council of Canada. The current salary floor for assistant professors is \$32,003 per year.

Concordia University is a predominantly English Institution located in downtown Montreal close to three other research intensive Universities. There are 29 full-time faculty in the Department of Chemistry and Biochemistry with active research programs in biochemistry, organic, inorganic and physical chemistry, photochemistry, and materials science. At the present time there are 50 graduate students enrolled at the M.Sc. and Ph.D. levels in the Department and about 15 of these are doing research in the area of biochemistry. The Department is housed adjacent to the Biology Department and this facilitates collaborative research interactions between biochemists in the two Departments.

All qualified individuals are encouraged to apply, but in accordance with Canadian Immigration requirements, this advertisement is primarily directed to Canadian citizens and permanent residents. Applicants should supply curriculum vitae, a short résumé of research interests, a summary of start-up requirements and arrange for three letters of reference to be sent to:

Dr. P. H. Bird
Department of Chemistry and Biochemistry
Concordia University
1455 de Maisonneuve Boulevard, West,
Montreal, Quebec
H3G 1M8

ASSISTANT PROFESSOR IMMUNOLOGIST UNIVERSITY OF MINNESOTA SEARCH REOPENED

The School of Dentistry of the University of Minnesota invites applications for a tenure-track position. The successful candidate will be expected to develop a vigorous independent research program and interact with scientists in the Clinical Research Center for Periodontal Diseases, the Dental Research Institute, and other excellent programs in cellular and molecular immunology. Applicants with outstanding programs or promise in any area of modern immunology are encouraged to apply. Minimal qualifications include a Ph.D. and postdoctoral experience or a D.D.S. degree with 5 years of research experience. Candidates must be qualified to teach in graduate and professional school courses. Excellent laboratories and start-up funds are available. Applicants should submit curriculum vitae, statement of professional goals, and the names of three references to: **Dr. Mark C. Herzberg, Chairperson, Immunologist Search Committee, School of Dentistry, 17-164 Moos Tower, University of Minnesota, Minneapolis, MN 55455.** Applications will be accepted until 3 February 1989. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

ASSISTANT RESEARCH MOLECULAR BIOLOGIST to join a program on transgenic mice with foreign prion protein (PrP) genes and study PrP transgenes in scrapie. Candidate must have 3 years of postdoctoral training in molecular biology. Expertise in cosmid libraries, recombinant plasmids, eukaryotic expression vectors and site-directed mutagenesis required. Salary range \$36,600 to \$45,700 per annum depending on experience. Send curriculum vitae and three letters of reference to: **Stanley Prusiner, University of California, San Francisco, CA 94143-0518.**

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POSITIONS OPEN

The Department of Radiology at the University of Minnesota has available a full-time, probationary tenure-track, **ASSISTANT PROFESSOR** position beginning 15 March 1989. Minimum requirements include a Ph.D. in chemistry, physics, or biophysics; a minimum of 1 year of postdoctoral experience in the application of in vivo MR spectroscopy. Responsibilities will include research in the area of magnetic resonance imaging and in vivo spectroscopy as well as graduate and undergraduate medical instruction and advising. Research performance will be strongly encouraged and evaluated. Salary is negotiable and competitive, and is dependent upon past scholarly productivity and experience. Applications will be accepted through 1 March 1989. Applicants should submit a letter detailing their scientific background, curriculum vitae, and three letters of recommendation to: **Dr. William M. Thompson, Professor and Chairman, Department of Radiology (Box 292 UMHC), University of Minnesota, 420 Delaware Street S.E., Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity and Affirmative Action Employer and specifically encourages applications from women and minorities.*

DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION UNIVERSITY OF ARKANSAS AT LITTLE ROCK (UALR)

Applications are invited for a tenure-track **ASSISTANT PROFESSOR** in the Department of Electronics and Instrumentation, College of Science and Engineering Technology at UALR. Applicants should have a Ph.D. in chemical/electrical engineering or chemistry/physics, preferably with 1 or more years of experience in teaching and research in analytical instrumentation applied to process control in areas such as GC, MS, HPLC, FTIR, and interfacing microcomputer with these instruments for process control and automation. Salary is competitive. Send curriculum vitae, list of publications, and two letters of reference by 15 February 1989 to: **Dr. M. K. Mazumder, Head, Department of Electronics and Instrumentation, UALR, 2801 South University, Little Rock, AR 72204.** Applications will be subject to inspection under the Arkansas Freedom of Information Act. *The University is an Equal Opportunity/Affirmative Action Employer and actively seeks the candidacy of minorities and women.*

ASSISTANT PROFESSOR OF PHYSIOLOGY

A tenure-track position for an assistant professor is available in the Department of Physiology, Eastern Virginia Medical School. Applicants must possess outstanding credentials in their area of research, and show promise of obtaining funding at the national level. Please send curriculum vitae and the names of three references to:

Russell L. Prewitt, Ph.D.
Chairman, Physiology Search Committee
Department of Physiology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA 23501

Eastern Virginia Medical School is an Equal Opportunity/Affirmative Action Employer.

MOREHEAD STATE UNIVERSITY

Department of Biological and Environmental Sciences **ASSISTANT PROFESSORS OF BIOLOGY** (Genetics, Ecology/Limnology, Immunology). Applications are invited for three 10-month tenure-track positions beginning August 1989 with a position available in each of the disciplines of genetics, ecology, limnology, and immunology. Responsibilities: Teach undergraduate and graduate level courses; advise students; participate in committee assignments; and provide regional service. Qualifications: Ph.D. from an accredited institution with evidence of potential for successful teaching, research and service; scholarly productivity; ability to direct graduate and undergraduate research. Strong communication skills. Submit letter of application, curriculum vitae and three letters of reference by 20 February 1989 to: **Office of Personnel Services, Morehead State University, HM-101, Morehead, KY 40351.** *MSU is an Equal Employment Opportunity/Affirmative Action Employer and requires compliance with the Immigration Reform and Control Act of 1986.*

POSITIONS OPEN

ASSISTANT PROFESSOR—Theoretical ecologist or theoretical population biologist. Applications are invited for a tenure-track assistant professorship beginning August 1989. Teaching responsibilities will include a theoretical ecology or population biology course and participation in undergraduate offerings. *The University of Wisconsin-Madison is an Affirmative Action/Equal Opportunity Employer and encourages women and minorities to apply.*

Please submit curriculum vitae, copies of publications, description of research and teaching interests, and have three letters of recommendation sent by 1 March 1989 to:

Chair, Population Biologist Search Committee
Department of Zoology
University of Wisconsin-Madison
Madison WI 53706
Telephone: 608-262-1087

ASSISTANT PROFESSOR MOLECULAR NEUROBIOLOGY

A tenure-track position is available in a growing interdisciplinary neuroscience research program between the Departments of Pediatrics and Anatomy. Preference will be given to applicants who have demonstrated expertise in applying molecular biology to the following areas of CNS research: oncology, development, immunology or genetics. The successful applicant will be expected to conduct an active research program which complements ongoing research efforts, to obtain extramural support and to participate in the medical school teaching responsibilities of the Department of Anatomy. Please submit curriculum vitae, statement of research goals, and names and addresses of four references to:

Shirley Ann Gilmore, Ph.D.
Professor and Chairman
Department of Anatomy (#510)
University of Arkansas for Medical Sciences
4301 West Markham
Little Rock, AR 72205-7199

The University of Arkansas for Medical Sciences is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF ANATOMY/DEVELOPMENTAL NEUROBIOLOGIST. Applications are invited for a tenure-track faculty position. The faculty member will be expected to participate in teaching histology and anatomy to dental and dental hygiene students and to establish an independent research program with extramural funding. Research on neural crest derivatives is particularly appropriate, although other areas will be considered. Send a complete curriculum vitae, a statement of research interests, selected reprints, and the names of three references to: **Dr. Robert Quinton-Cox, Chair, Search Committee, Department of Anatomy, School of Dentistry, Oregon Health Sciences University, 611 SW Campus Drive, Portland, OR 97201.** Applications will be accepted until 15 February 1989 or until the position is filled.

ASSISTANT/ASSOCIATE PROFESSOR

One long-term track faculty position. Begin late August 1989. Ph.D. required, some teaching experience—geneticist. Expected to teach upper and lower division courses and conduct research with undergraduate biology majors with innovative nongovernment course development. Liberal arts environment. Some possibilities of graduate teaching. Letter stating interests, complete résumé, transcripts, and three letters of reference due prior to 17 February 1989 to: **Sister John Karen Frei, Associate Vice President, Academic Health Science Center, Barry University, Miami Shores, FL 33161.**

ASSISTANT/ASSOCIATE PROFESSOR OF FISHERIES

Oregon State University. Tenure-track. Applications are invited from Fishery Scientists having a Ph.D. degree and demonstrated proficiency in mathematical ecology and modeling of marine fisheries. Position located at Hatfield Marine Science Center, Newport, Oregon, involves modeling shrimp and groundfish fisheries. Please submit letter of application and curriculum vitae and request three referees to forward letters of recommendation to: **Marine Fisheries Search Committee, Hatfield Marine Science Center, Newport, OR 97365.** Telephone: 503-867-3011. Closing date is 15 February 1989. *OSU is an Affirmative Action/Equal Employment Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR—INSECT PEST MANAGEMENT/VEGETABLES. (Extension/Research). Tenure-track. Duties include extension (60%)—demonstration and implementation of insect pest management programs. Research (40%)—management of major insect pests of vegetables. Full position description available. Qualifications include Ph.D. in entomology or related discipline with training in insect pest management. Forward: (i) letter describing qualifications and interest, (ii) curriculum vitae, (iii) list of publications (include reprints), (iv) transcripts (post-secondary education), (v) names and addresses of three references to: **R. A. Morse, Chair, Department of Entomology, Cornell University, Comstock Hall, Ithaca, NY 14853-0999.** Application deadline is 1 April 1989. *Cornell is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE MEMBERS

The James N. Gamble Institute of Medical Research is seeking investigators in the Division of Enteric Viruses. Minimum requirements for successful candidates will be completion of postdoctoral studies and the ability and interest to establish or continue active research programs. Preference is for applicants specializing in viral immunology, molecular biology of enteric viruses, or animal modeling of human enteric viral diseases. No formal teaching will be required but a joint appointment at a local university is encouraged. Salaries and benefits are highly competitive and start-up funding will be available. Applications should be sent to: **R. L. Ward, Director, Division of Enteric Viruses, Gamble Institute of Medical Research, 2141 Auburn Avenue, Cincinnati, OH 45219.** *Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF MEDICAL ONCOLOGY

The University of Colorado Health Sciences Center, Denver, Colorado, is seeking an M.D. or Ph.D. for tenure-track position (specialty-track may be selected after 4 years), who is interested in starting an independent laboratory-based research program. The position will involve no clinical responsibilities, with 100% protected time for laboratory research. Minor teaching or patient care roles may be undertaken at individual's discretion, and joint appointments can be arranged with other medical school departments. Laboratory space is available with appropriate funds for equipment and technical support during the transition to independence. Starting salary will be competitive, commensurate with experience. Applicants should submit curriculum vitae to: **Dr. L. Michael Glode, Division of Medical Oncology, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262.** *An Equal Opportunity/Affirmative Action Employer.*

Queens College of CUNY—Department of Chemistry invites applications for tenure-track positions at the **ASSISTANT OR ASSOCIATE PROFESSOR** level, one in the area of organic chemistry and the other in biochemistry beginning fall 1989. Candidates with an outstanding research potential and/or research record and a commitment to excellence in teaching (undergraduates, M.A., Ph.D.) are sought. Candidates should submit curriculum vitae and a plan of research to: **Search Committee c/o Professor Robert Bittman, Department of Chemistry, Queens College of CUNY, Flushing, NY 11367.** Applications received by 1 March 1989 are assured of full consideration. Applicants should also arrange for three letters of reference to be sent directly to: **Professor Robert Bittman.** *Affirmative Action/Equal Employment Opportunity Employer.*

A 1-year position with possible renewal for a second year is available immediately for a Ph.D. **BIOCHEMIST** to work with **Dr. S. Claster** on the mechanisms of red cell membrane damage induced by neutrophil enzymes and cationic proteins. Send complete curriculum vitae and the names of three references to:

**Children's Hospital Oakland
Human Resources Department
747 52nd Street
Oakland, CA 94609**

An Equal Employment Opportunity Employer.

CHEMIST

Athena Neurosciences, currently involved in the synthesis of novel compounds for various neurological diseases, has a position open for an Organic Chemist. The optimal candidate would have a Ph.D. in chemistry or medicinal chemistry or have a BS/MS with significant experience. Position requires extensive training in organic synthesis, preferably in the synthesis of drug molecules. Hands-on experience with NMR, GC/MS and HPLC is also desired. The individual will be an integral member of the drug delivery team which includes pharmacologists, synthetic chemists, analytical chemists and clinicians.

Athena, backed by the most prominent venture capital investors in the biotechnology industry, offers an innovative and exciting scientific environment, competitive salaries and benefits, and equity participation. Please send CV to: **Athena Neurosciences, Ad #36B, 800F Gateway Blvd., South San Francisco, CA 94080.** EOE.

athena neurosciences

POSTDOCTORAL RESEARCH ASSOCIATE HST OBSERVATIONS AND DATA ANALYSIS

The Laboratory for Atmospheric and Space Physics of the University of Colorado invites applications for the position of Research Associate. We anticipate an opening beginning in the fall of 1989 for participation in observations and data analysis for the Hubble Space Telescope (HST). The undersigned is the Principal Investigator for the Goddard High Resolution Spectrograph (GHRS) and the activities deal with the ultraviolet spectroscopy of comets and GHRS Team Projects covering a wide range of astrophysics.

LASP facilities include the data analysis and operations control center for the Solar Mesosphere Explorer mission; a development node of the Planetary Data System; a complete space instrument design, fabrication, test and calibration facility; and modern computer facilities. In addition, there is an ongoing sounding rocket program, and payloads for shuttle-launched missions are being developed. The Laboratory is an Institute of the University's Graduate School and has close ties with the Departments of Astrophysical, Planetary and Atmospheric Sciences and of Aerospace Engineering Sciences.

A doctorate in an appropriate discipline is required; salary will be in accord with experience. Send letters of application with an up-to-date resume and the names of two references to:

Dr. John C. Brandt, PI-GHRS
LASP/University of Colorado
Campus Box 392
Boulder, CO 80309-0392

Applications will be accepted until February 1, 1989. The University of Colorado has a strong institutional commitment to the principle of diversity in all areas. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities and disabled individuals.

DIRECTOR

Fermi National Accelerator Laboratory



The Fermilab Board of Overseers of Universities Research Association, Inc., (URA) has initiated a search for a new Director of the Fermi National Accelerator Laboratory. The position will be available July 1, 1989. The Search Committee is now in the process of assembling a list of suitable candidates and welcomes applications and nominations from the community of high energy physicists. Communications and resumes, which must be received by February 15, 1989, should be sent to:

Dr. Harold K. Ticho, Chairman
Search Committee
Universities Research Association, Inc.
Suite 400
1111 19th Street, N.W.
Washington, D.C. 20036

URA is an affirmative action/equal opportunity employer.

PHARMACEUTICAL

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A leading pharmaceutical company has an opening in the Northern California Region for a Regional Medical Associate to combine both scientific expertise and marketing skills. The selected candidate will report directly to the Regional Vice President and will be headquartered in the San Francisco Bay Area. Responsibilities are to establish effective relationships within key medical institutions, providing scientific liaison and in-depth information essential to appropriate use of SK&F's products. Will also have training responsibility at the Representative, Medical Staff and Pharmacy levels. Some travel required.

Qualifications include a Ph.D. in Pharmacology, Biochemistry, Microbiology or other Life Sciences. Must possess initiative, strong communication skills, and interest in Marketing.

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Box 7, SCIENCE

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POSITIONS OPEN

ASSISTANT, ASSOCIATE, OR FULL PROFESSORS OF BIOLOGY. The Biology Department at Winona State University invites applications for two tenure-track positions: **Cell Biologist/Microbiologist** to teach courses including animal cell culture and microbiology and **Field/Organismic Biologist** to teach courses including vertebrate biology and environmental biology. Ph.D. in one of the biological sciences from an accredited graduate institution is required. Successful candidates for both positions will be expected to develop a vigorous research program which involves undergraduate students and to participate in departmental affairs. Rank and salary are dependent on qualifications and experience. Current salary ranges are \$23,922 to \$35,164 (assistant), \$28,096 to \$41,525 (associate) and \$32,148 to \$47,598 (full). *Minorities and women are especially encouraged to apply.* Applicants should send curriculum vitae, a statement of teaching interests, a statement of research interests and the names of three references who can speak to the applicants' potential for excellence in both teaching and research to: **Biology Searches, Human Resources, Winona State University, Winona, MN 55987.** Consideration of applications will begin on or before 1 March 1989. *An Affirmative Action/Equal Opportunity Employer.*



ASSOCIATE DIRECTOR CURATORIAL

The Royal Ontario Museum is seeking applications for the position of Associate Director, Curatorial (ADC). The ADC is responsible for the management, administration and financial control of the curatorial activities and related services at the Museum. Reporting to the ADC are nineteen curatorial departments responsible for Earth Sciences, Life Sciences and various Art and Archaeology subject areas, as well as a curatorial services department (Collections Management, Registration, Conservation and Photography). The ADC is responsible for approximately 195 staff and a total budget of slightly over \$9 million.

The primary responsibility of the position is to provide leadership for curatorial excellence within the Museum which will ensure: the preservation, conservation and integrity of presentation to the public of the museum's collections; the quality of collections-related research; and structured curatorial input into the program of gallery development, temporary exhibitions, and other public programs.

The successful candidate will hold a Ph.D. degree or the equivalent and will have demonstrated high scholarly achievement in one of the academic subject areas covered by the museum. He or she will also have demonstrated superior managerial, communication and problem-solving skills obtained through progressively more responsible positions.

The ADC reports to the Director and normally is Acting Director in the absence of the Director. The position requires considerable independent judgment and action within the ADC's area of responsibility, as well as close liaison and participation with other senior staff and department heads in order to ensure the success of the museum's many objectives. The ADC has frequent contact with museum trustees, members and volunteers, as well as various government agencies.

The position is a term appointment for 5 years made by the Board of Trustees on the recommendation of the Director, and renewable by mutual consent.

Salary range: comparable to similar levels of responsibility in the Ontario Civil Service.

Applications should be sent to: **T. Cuyler Young, Jr., Director, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada, M5S 2C6,** no later than 20 February 1989.

This advertisement is directed primarily to Canadian citizens and landed immigrants, but others are invited to apply.

POSITIONS OPEN

ASSOCIATE OR FULL PROFESSOR MOLECULAR BIOLOGY

A tenured position is available in the Rosenstiel Basic Medical Sciences Research Center as a joint appointment with the Graduate Department of Biochemistry. We seek candidates who are investigating basic mechanisms in molecular biology, in fields ranging from replication to gene expression. Curriculum vitae should be sent to:

**Dr. David DeRosier
Rosenstiel Basic Medical Sciences Research Center
Brandeis University
P.O. Box 9110
Waltham, MA 02254-9110**

The deadline for applications is 1 March 1989.

Brandeis University is an Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST-CELL BIOLOGIST ASSISTANT PROFESSOR

The Biology Department at Williams College has a tenure-track opening for a broadly trained biochemist to teach courses in modern cell biology and biochemistry. (Previously advertised as an anticipated opening in cell physiology/biochemistry.) Ph.D. required. Postdoctoral experience desirable. Faculty are expected to conduct active research programs in which qualified undergraduates may be involved. Start-up funds for research are provided. Position available 1 July 1989. Please send curriculum vitae, statement of research/teaching interests and three letters of reference by 31 January 1989 to: **Search Committee, Department of Biology, Williams College, Williamstown, MA 01267.**

An Equal Opportunity/Affirmative Action Employer, Williams College especially welcomes applications from women and minority candidates.

BIOLOGICAL ANTHROPOLOGY

Harvard University, Department of Anthropology invites applications for an assistant professor position in **Primate (including Human) Genetics or Human Biology**, with strong laboratory orientation; preference for evolutionary perspective. The successful candidate will be involved in undergraduate and graduate programs, teaching both lecture and laboratory courses. *Harvard University encourages applications from women and members of minority groups.* Candidates should send curriculum vitae, bibliography, statement, and names of references by 15 February 1989 to: **Chair: Department of Anthropology, Harvard University, Cambridge, MA 02138.**

UNIVERSITY OF ALBERTA FACULTY OF REHABILITATION MEDICINE CARDIOVASCULAR OR CARDIOPULMONARY POSITION

Applications are invited for a tenure-track position in the Department of Physical Therapy at the University of Alberta. Applicants must possess a doctorate and have an active research program. A physical therapy background and postdoctoral experience would be an asset.

The University of Alberta offers Bachelor of Science and Master of Science degrees in physical therapy. A Ph.D. in rehabilitation is proposed.

Applicants should have research and teaching capability in cardiac and/or pulmonary rehabilitation and exercise. Other areas such as health education, occupational physiology and conditioning would be an asset.

Responsibilities include undergraduate and graduate teaching, graduate supervision, research and scholarly work and some administrative duties. A strong commitment to obtaining external research funding is expected. This appointment may be a joint appointment with the Department of Physical Education and Sports Studies and in this case, teaching and graduate supervision in both departments will be expected.

Salary commensurate with qualifications and experience. Range for assistant professor is from \$33,144 to \$47,280 (per annum); for associate professor, from \$41,390 to \$59,534 (per annum).

Qualified applicants should send curriculum vitae, stating teaching and research interests, and provide three references to: **Dr. Martha C. Piper, Dean, Faculty of Rehabilitation Medicine, 316 Corbett Hall, University of Alberta, Edmonton, Alberta, Canada T6G 2G4.**

Deadline for receipt of applications is 1 March 1989. *The University of Alberta is committed to the principle of equity in employment.*

POSITIONS OPEN

BIOLOGIST

Vassar College seeks a visiting biologist with broad training for a 1-year position with renewal for an additional year possible. Vassar College is a liberal arts institution which emphasizes teaching and research. Excellent laboratory facilities are available. Expertise in nutritional or hormonal physiology required; developmental biology, biopsychology or human sexuality desirable. Teaching load will be two courses per semester selected from nutrition, physiology, introductory biology, human sexuality or developmental biology. Applications due by: 20 February 1989. Send application, curriculum vitae and three (3) letters of recommendation to: **Dr. M. R. C. Greenwood, Chair, Vassar College Biology Department, Poughkeepsie, NY 12601.** *Affirmative Action/Equal Opportunity Employer.*

BIOLOGY—TWO POSITIONS: (i) Animal Physiology/Neurobiology. A 2-year appointment with the possibility for tenure is available for September 1989. Candidate must have Ph.D., be committed to undergraduate teaching, and develop a research program that involves undergraduates. Teaching will include a laboratory and lecture course in animal physiology, and introductory biology for majors and nonmajors. (ii) Ecology/Vertebrate Biology. A 1-year sabbatical replacement position to teach introductory biology for major and nonmajors and possibly ecology or vertebrate biology. Send résumé and three letters of recommendation to: **Dr. Patricia S. Brown, Head, Department of Biology, Siena College, Loudonville (Albany), NY 12211.** *Members of minority groups are urged to apply. Equal Opportunity Employer.*

BIOLOGY, VERTEBRATE ANATOMIST/PHYSIOLOGIST, ASSISTANT PROFESSOR. Tenure-track faculty position available September 1989. Duties: Chordate morphology course for biology majors in the fall semester, vertebrate physiology course for biology majors in the spring semester, two sections of general biology laboratory during the fall semester. Ph.D. in hand or near completion. Send curriculum vitae, names of three references, and a brief description of teaching experience and research interests to: **Dr. Richard G. Heller, Biology Department, Albright College, PO Box 15234, Reading, PA 19612-5234.** Review of applications begins 1 February 1989. *Albright College seeks applications from minority and women candidates. Affirmative Action/Equal Opportunity Employer.*

CLINICAL ELECTROPHYSIOLOGIST

The Department of Otorhinolaryngology and Human Communication, University of Pennsylvania School of Medicine seeks a Ph.D. clinical neurophysiologist. The applicant must have demonstrated expertise, at least 5 years of experience and refereed publications in multimodal evoked potentials, with specialized expertise in intraoperative and intensive care monitoring of evoked potentials and quantitative EEG. Expertise in topographic brain electrical activity mapping is required. Contact: **Daniel M. Schwartz, Ph.D., Division of Bioelectro-Diagnosis and Neural Monitoring, University of Pennsylvania Medical Center, 3400 Spruce Street, Philadelphia, PA 19104.** *The University of Pennsylvania is an Equal Opportunity Employer.*

DEAN COLLEGE OF NATURAL RESOURCES UTAH STATE UNIVERSITY

Applications or nominations are invited for the Dean. Qualifications: An earned doctorate and demonstrated scholarly achievement commensurate with rank as a full professor in one of the disciplines of the College (Fishes and Wildlife, Forest Resources, Geography and Range Science), evidence of excellence in teaching and research, demonstrated administrative and fiscal effectiveness, preferably in higher education, an understanding of the role of a modern land-grant institution, including the extension mission, and a knowledge of international development programs and extramural funding procedures.

Applications: Please send cover letter, curriculum vitae and names of four people willing to provide references to: **Dean Search Committee, College of Natural Resources, Utah State University, Logan, UT 84322-5200.** Closing date: 1 March 1989 or until suitable applicant is found.

USU is an Affirmative Action/Equal Opportunity Employer.

LEAD SCIENTIST

Atherosclerosis Research

For more than a century, scientists at ELI LILLY AND COMPANY have developed innovative, high quality pharmaceutical products. In 1988, Lilly invested over \$500 million in research-and-development programs. More than 3,000 scientists at the company's Lilly Research Laboratories are pursuing creative research programs that involve many important health care needs.

To further build its research capabilities, Lilly is seeking an accomplished scientist to lead an atherosclerosis program. This individual will establish a preclinical group of Senior Scientists whose mission will be exploratory research and discovery of drugs to treat atherosclerosis and related vascular disorders, and should have the following qualifications:

- Self-motivation, vision, and the ability to conceptualize, focus, and organize a basic research and drug-discovery program with particular emphasis on biology of the vascular wall.
- Either Ph.D. or M.D. degree, with a minimum of seven years academic or industrial experience, and an indepth understanding of the mechanisms underlying the atherosclerotic process.
- An established research record in the area of atherosclerosis and a national scientific reputation.

In addition, this scientist must have the leadership capabilities needed—analytical, communication, interpersonal, and organizational skills—to build a research program. The successful candidate will have an opportunity to recruit Senior Scientists in the process of building the program.

Eli Lilly and Company is committed to scientific excellence. Lilly provides a stimulating professional atmosphere with many opportunities for collaborative, multidisciplinary research. The company offers an attractive total compensation program. Entry level and salary will be based upon the candidate's experience.

For prompt consideration, please forward your *curriculum vitae* to:

John W. Crooks, Manager
Ph.D. Recruitment (ASR)²
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285



Equal Opportunity Employer

POSITIONS OPEN

CENTER FOR BIOTECHNOLOGY UNIVERSITY OF NEBRASKA— LINCOLN (UNL)

State funding for new research initiatives is enhancing biotechnology at UNL. Increasing the number of **BIOTECHNOLOGY FACULTY** over the next 4 years is a major goal. We invite applications for the following positions:

• **Molecular plant physiology**, especially in the areas such as molecular and biochemical analysis of plant stress responses, photobiology, photosynthesis, hormone action, or nutrient utilization. Chair: **Dr. Paul Staswick, 402-472-5624.**

• **Plant vector/plant transformation system**, especially in the areas of fundamental or applied biological problems, such as plant-*Agrobacterium* interactions, mechanisms of DNA insertion, or gene regulation. Chair: **Dr. Martin Dickman, 402-472-2849.**

• **Chromosome molecular-structure/function**, especially in the areas of molecular biophysics (e.g. NMR or crystallographic determination of nucleic acids and/or protein properties), examination of chromosome molecular structure, or gene regulation, but not limited to the above. Chair: **Dr. Carolyn Price, 402-472-3518.**

• **Animal virology**, especially in the areas of gene regulation and expression, viral replication, or molecular mechanisms of viral pathogenesis and immunity. Chair: **Dr. Daniel Rock, 402-472-3351.**

Substantial start-up funds and technical support for research are available. Must have demonstrated research potential through postdoctoral experience and recent publications, and are expected to develop a vigorous research program through extramural funding. All appointments are primarily for research; teaching is expected principally at the graduate level. Positions are for assistant professor, or in exceptional cases, higher rank.

Participating Department/Units in the current searches are: The Departments of Agronomy; Animal Science; Biochemistry; Chemistry; Plant Pathology; Veterinary Science and the School of Biological Sciences.

Application deadline is 15 February 1989, or until suitable candidates are identified. Submit a letter of interest, curriculum vitae, synopsis of a proposed research program and arrange for at least three reference letters to the appropriate Chair, c/o Center for Biotechnology, C202 AnS, UNL, Lincoln, NE 68583-0945. For electronic mail, FAX (402) 472-2853.

Affirmative Action/Equal Opportunity Employer.

Middlebury College: Applications are solicited for a 2-year leave replacement for a **CHEMIST** capable of teaching organic and inorganic chemistry at the undergraduate level. Teaching effectiveness at the undergraduate level and potential to involve undergraduates in research are most important considerations. Ph.D. or A.B.D. required. Send letter describing background and research interests, an up-to-date curriculum vitae, undergraduate and graduate transcripts, and three current letters of reference to: **R. W. Gleason, Chairman, Department of Chemistry and Biochemistry, Middlebury College, Middlebury, VT 05753.** Application deadline is 17 February 1989. *Middlebury College is an Equal Opportunity Employer.*

ECOLOGIST—Tenure-track position, ecosystems focus, available fall 1989. The successful applicant will develop a quality, externally-funded research program, and teach undergraduate, M.S., and Ph.D. students. Appointment expected at assistant professor level, but exceptional candidates may be considered at advanced levels. Lehigh University has both marine and freshwater research stations and is actively developing interdisciplinary programs. Send curriculum vitae, and telephone numbers of three references by 10 February 1989 to: **Dr. Craig Williamson, Search Committee Chair, Department of Biology # 31, Lehigh University, Bethlehem, PA 18015.** *Lehigh University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF STOMATOLOGY UNIVERSITY OF CALIFORNIA, SAN FRANCISCO SCHOOL OF DENTISTRY

Full-time position as Chairperson of the Department of Stomatology which includes programs in oral biology, oral medicine, oral pathology, periodontology, and oral radiology. Responsibilities include providing academic and administrative leadership in research, teaching, patient care and community and university service for undergraduates, predoctoral and postdoctoral students, and faculty. Demonstrated administrative experience and academic qualifications (D.D.S., M.D., Ph.D. or equivalent degree) for a senior professional rank are required. Salary commensurate with qualifications and experience. *Applications from women and minorities are encouraged. The University of California, San Francisco is an Equal Opportunity, Affirmative Action Employer.*

Please send curriculum vitae and the names of three individuals familiar with your work to: **Dr. Leonard B. Kaban, Chair, Search Committee, In care of: Office of the Dean, School of Dentistry, Box 0430, UCSF, San Francisco, CA 94143.** Applications should be submitted by 28 February 1989.

CYTOGENETICIST, MASSACHUSETTS GENERAL HOSPITAL

We invite applications for a staff position in cytogenetics. Applicants should have a Ph.D. or M.D. degree, experience in cytogenetics (preferably with certification in clinical cytogenetics), a strong background in molecular biology, and research accomplishments. The person appointed will be Associate director of the Cytogenetics Laboratory at the MGH and Assistant or Associate Professor of Pathology at Harvard Medical School. Send curriculum vitae and the names of three persons from whom recommendations can be solicited to: **Dr. Robert T. McCluskey, Department of Pathology, Massachusetts General Hospital, Boston, MA 02114.**

The Massachusetts General Hospital and Harvard Medical School are Affirmative Action/Equal Opportunity Employers.

DIRECTOR PLANT CELL CULTURE AND TRANSFORMATION FACILITY CORNELL PLANT SCIENCE CENTER

Facility Director (Senior Research Associate, Ph.D.) to administer a central resource facility which has the following missions: (i) training of scientists in techniques of plant tissue culture and gene introduction and (ii) provision of state-of-the-art equipment to produce transgenic plants. In addition to facility management, the director will carry out independent research in the area of experimental analysis and transfer of plant genes, and will play a key role in organizing and teaching periodic workshops and training courses in plant and microorganism transformation.

To apply, send curriculum vitae and three letters of reference to: **Plant Science Center, Biotechnology Program, 130 Biotechnology Building, Cornell University, Ithaca, NY 14853-2703.** *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

ECOLOGIST—Faculties of biology and environmental science, Antioch College. Duties include teaching ecology, either vertebrate or invertebrate zoology, general biology, and associated courses appropriate to candidate's background and interests. Broad professional development is encouraged. *Minorities and women are urged to apply.* Two-year appointment. **Biology Search, Personnel Office, Antioch College, Yellow Springs, OH 45387.**

ELECTRON MICROSCOPIST: The Department of Pathology of the Oregon Health Sciences University has a faculty position opening for a director of our Electron Microscopy Laboratory. This individual should have an M.D., Ph.D., or equivalent degree and be familiar with the ultrastructure of a wide variety of biologic tissues. We anticipate the appointment will be at the level of assistant professor. Please apply to: **Dr. G. Colin Buchan, Department of Pathology, L 113, 3181 S. W. Sam Jackson Park Road, School of Medicine, Oregon Health Sciences University, Portland, OR 97201.** *The Oregon Health Sciences University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ENTOMOLOGY SCIENTIFIC ASSISTANT

The Department of Entomology of the American Museum of Natural History is seeking a qualified individual to assist curators with our distinguished collections. Responsibilities include collection management, scientific illustration, sorting and identification, cataloging, preparation of dissections, mounting, labeling, loan preparation, library research and assisting curators with their research projects.

Qualified applicants must have a baccalaureate degree in entomology, or a related degree in the biological sciences with studies or work-related experience in entomology; some collection-related experience and illustration skills preferred; interest and knowledge of Diptera helpful as is the ability to do detailed and meticulous work. Knowledge of data/word processing preferred.

Salary: \$20,511 per annum. Excellent benefits. For consideration, submit résumés to: **Mr. Lee Vilensky, Personnel Department (S), American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024.** *An Equal Opportunity Employer.*

ENVIRONMENTAL RESEARCH ENGINEER AT A LARGE RESEARCH UNIVERSITY

Requirements: B.S. (civil engineering), M.S. (environmental engineering). Experience: Three years of research in biological industrial wastewater treatment; 1 year in area of laboratory-scale applications of activated sludge and rotating biological contactor processes to the treatment of paint stripping wastewaters. Experience may be gained simultaneously and during academic studies. Duties: Design, planning and implementation of projects on field-scale biological treatment of U.S. Navy aircraft paint stripping wastewaters, data analysis/interpretation, and report writing. Salary of \$31,000 per year for a basic work week of 40 hours. Send résumé to: **Job Order #091075, Oklahoma State Employment Service Office, 3740 Spring Lake Drive, Oklahoma City, OK 73111 (5515).**

EXTENSION ENTOMOLOGY (ASSISTANT/ASSOCIATE PROFESSOR). A tenure-track, 12-month appointment, 80% extension and 20% research, at the Florida Medical Entomology Laboratory of the University of Florida (IFAS). The successful candidate will serve as liaison to the Mosquito Control Agencies of the State of Florida. Applicants must have a Ph.D. in a biological science, postdoctoral experience in mosquito biology and control, and demonstrate communication skills.

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

**Dr. J. R. Rey
Search and Screen Committee
Florida Medical Entomology Laboratory
200 9th Street S.E.
Vero Beach, FL 32962**

by 1 March 1989.

The University of Florida is an Equal Opportunity Employer.

FACULTY POSITION IN EXPERIMENTAL ONCOLOGY CORNELL UNIVERSITY COLLEGE OF VETERINARY MEDICINE

Cornell University invites applications for a tenure-track faculty position in its Cancer Cell Biology Laboratories. Candidates will have a Ph.D. (and/or D.V.M. M.D.) degree and at least 2 years of postdoctoral experience. He/she will be expected to develop an active research program in basic (or applied) cancer research that complements existing programs in organ preference of metastasis, cell-cell and cell-substrate interaction, growth and signal transduction, differentiation, oncogene expression and viral transformation, etc.; and will also participate in the teaching of graduate students. Rank and salary are commensurate with qualifications. Applications will be accepted through 31 May 1989 and should contain curriculum vitae, a letter outlining the research program, and three letters of reference. They should be sent to: **Dr. Bendicht U. Pauli, Chairman Oncology Search Committee, Department of Pathology, Cornell University College of Veterinary Medicine, Ithaca, NY 14853-6401.** *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

POSITION ANNOUNCEMENT
DIRECTOR
INSTITUTE ON GLOBAL CONFLICT
AND COOPERATION
UNIVERSITY OF CALIFORNIA

The University of California invites applications and nominations for the position of Director of the Institute on Global Conflict and Cooperation (IGCC), a University of California multicampus research unit funded by the Regents of the University of California, the State of California, and private foundations. The mission of the Institute is to enhance the capability of the University of California to contribute to international security and cooperation through research, education, and special projects. Through a variety of programs—research grants, graduate fellowships, summer seminars, lectureships, conferences, and publications—the Institute seeks to discover ways to prevent or reduce conflicts that may lead to escalation into large scale conventional or nuclear war and to promote forms of international cooperation which promise to solve problems threatening world peace.

Candidates must be qualified for appointment as a senior faculty member of the University of California and be prepared to assume the directorship at the San Diego campus of the University, the current location of the Institute. The director of the Institute reports to the President of the University of California. He or she provides leadership and visibility to the Institute, in addition to being responsible for its array of regular activities as a multicampus research unit of the University of California. These activities include soliciting research proposals, creating task forces, colloquia and study groups, conducting conferences and seminars, securing extramural research support, promoting educational and public service programs, and coordinating intercampus projects. The director will be assisted in these activities by a steering committee and staff. Teaching responsibilities and departmental affiliation are subject to negotiation.

Qualified women and minority candidates are urged to apply.

Please send nominations or applications, including cv's and the names of four references, to:

IGCC Search Committee
 Professor Randolph Siverson, Chair
 359 University Hall
 Office of the President
 University of California
 Berkeley, CA 94720

Candidates who send their complete applications by February 17, 1989 will receive full consideration. The position will remain open until final decisions are made by the Search Committee.

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

Marine Biological Laboratory
MOLECULAR PROBES IN MARINE ECOLOGY:
CONCEPTS, TECHNIQUES AND APPLICATIONS

June 18 - July 29, 1989

This is an intensive course for graduate students, postdoctoral fellows and established investigators who wish to learn the techniques of molecular biology and their application to physiological and ecological investigations. Lectures and discussions will accompany the laboratories and will focus on the technologies being learned and applications to specific problems in marine ecology. In addition, a MINI SYMPOSIUM ON GLOBAL ECOLOGICAL ISSUES is planned in conjunction with this course.

There will be two technique modules and one optional independent project module:

Module 1 -Nucleic Acid Probes

Objective: To gain theoretical and practical experience and competence in a variety of techniques using fish and other marine organisms as experimental material.

Module 2 - Immunochemical Probes, Molecular Biology and Microphysiological Techniques

Objective: Building on the techniques in Module 1 students will learn the procedures and limitations of immunological methods for the detection of specific proteins (enzymes) and also for detection of specific cells and cell types as well as newer microtechniques for measurement of pH and O₂.

Module 3 - Independent Projects in Molecular Marine Ecology

An optional third three-week module will be comprised of independent research-oriented projects utilizing the techniques learned in modules 1 and 2. Possible topics include: recruitment, environmental adaptation and physiological ecology, and food chain studies.

Director: J. W. Hastings, Harvard University

Faculty: D. A. Powers, Stanford University; H. W. Paerl, University of North Carolina; T. T. Chen, University of Maryland; S. Giavannoni, Oregon State University; B. Ward, University of California, Santa Cruz; R.G. Rowan, Center for Marine Biotechnology (University of Maryland and Johns Hopkins University). Limited to 24 students. **Application Deadline: March 1, 1989.**

For further information contact :Admissions Coordinator, Office of Sponsored Programs
 Marine Biological Laboratory, Woods Hole, Massachusetts 02543.
 Telephone: (508) 548-3705, Ext. 216

BIOMEDICAL RESEARCH
AND DEVELOPMENT

ICI Pharmaceuticals Group, which includes Stuart Pharmaceuticals and ICI Pharma, is one of the fastest-growing producers of quality pharmaceuticals in the U.S. Expansion of our research programs has created challenging openings at our state-of-the-art laboratories in Wilmington, DE:

CNS Pharmacology

ELECTROPHYSIOLOGIST: PhD in Pharmacology or Physiology in the area of electrophysiology and pharmacology of ionic channels. Experience and skills should include proficiency in the use of the patch-clamp technique for whole cell recording and for single-channel recording. Working experience with primary cell culture is highly desirable. Successful candidate will be part of a newly created Molecular and Cellular Pharmacology Unit intended to explore receptor and channel mediated cellular function.

PHARMACOLOGISTS: BS/MS in Biology or Biochemistry with experience in neurobiology or cell biology to work on receptor binding techniques, catecholamine metabolism or second messenger assays. Experience with tissue culture, HPLC analysis is desirable.

Pulmonary Pharmacology

BIOCHEMICAL PHARMACOLOGIST: BS/MS in Biological Sciences with strong biochemical background to work on the characterization of synthesis and action of lipid hormones (i.e. prostaglandins, leukotrienes and platelet activating factor) in the lung. Experience with separation techniques and RIAs is desirable.

PHARMACOLOGIST: BS/MS in relevant discipline with training/experience in biology/pharmacology to conduct *in vivo* studies measuring pulmonary mechanics. Additional assignments will include *in vivo* measurements of gastrointestinal motility.

General Pharmacology

SENIOR PHARMACOLOGIST: PhD position for Post-doctoral Fellow or Senior Member with degree in smooth muscle and/or autonomic pharmacology, experience in *in vivo* and/or *in vitro* techniques, and strong record of research ability and communication skills. Knowledge in receptor theory desirable.

PHARMACOLOGIST: BS/MS in biological sciences or related discipline for work involving *in vitro* tests using isolated tissues for characterization of pharmacological activity of compounds. Familiarity with receptor function and electrolyte transport and membrane pharmacology/physiology is preferred.

Medicinal Chemistry

MEDICINAL CHEMISTS: BS/MS in Organic Chemistry with a strong background in organic synthesis including the ability to conduct multi-step synthetic sequences, chromatographic purifications and spectral interpretations. Positions involve the synthesis, isolation and characterization of novel organic compounds as candidates for drug discovery and development.

We offer an excellent salary and benefits program, including tuition aid for approved graduate study, and opportunities for professional growth.

Please send your resume with salary requirement, **indicating the position for which you are applying, to:**

Mary S. Carroll
 ICI Pharmaceuticals Group
 Wilmington, DE 19897



Pharmaceuticals
Group

An Equal Opportunity Employer M/F.

POSITIONS OPEN

FACULTY—Department of Psychology at Illinois Wesleyan seeks to fill an open rank tenure-track Ph.D. position for fall 1989. The position is in neuroscience/physiological psychology, and typical courses will include a survey of neuroscience and a physiological psychology laboratory. Selection begins 1 March 1989. Send letter, curriculum vitae, and three letters of reference to: **Dr. Clavdetscher, Psychology, Illinois Wesleyan University, Bloomington, IL 61702.** Women and minorities are encouraged to apply. An Equal Opportunity Employer.

FACULTY MEMBER MOLECULAR PATHOGENESIS CASE WESTERN RESERVE UNIVERSITY

The Division of Infectious Diseases of the Department of Medicine at Case Western Reserve University and University Hospitals of Cleveland is seeking a Ph.D.-scientist trained in bacterial genetics or molecular pathogenesis for a tenure-track position at the level of assistant professor. This person would join a multidisciplinary research group focusing on host-parasite interactions in mycobacterial infections and would be expected to develop independent as well as collaborative research projects on mycobacterial constituents associated with virulence and protective immunity. Send curriculum vitae and list of four references to:

Dr. J. J. Ellner
Department of Medicine
University Hospitals of Cleveland
2074 Abington Road
Cleveland, OH 44106

CWRU is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION IN BIOCHEMICAL SCIENCES

Applications are invited from scientists with at least 2 years of postdoctoral experience for a tenure-track position in the Division of Biochemical Sciences, Department of Chemistry, Lehigh University. Rank is at the assistant professor level although appointment at the associate professor level for outstanding candidates is not precluded. The successful applicant is expected to participate in teaching undergraduate and graduate courses and to establish a strong, independent externally-funded research program. Research area is open but special consideration will be given to those involved in immunochemistry, lipid/membrane chemistry and areas which overlap and complement existing programs within the department. Applicants should send curriculum vitae, list of publications, brief description of research objectives and list of three references to: **Dr. J. A. Alhadeff, Biochemistry Search Committee, Department of Chemistry, Lehigh University, Building A, MTC, Bethlehem, PA 18015.** Applications received after 1 March 1989 cannot be guaranteed full consideration. *Lehigh University is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION IN GEOGRAPHIC INFORMATION SYSTEMS. The School of Forestry and Environmental Studies at Yale University invites applications for a faculty appointment, at the assistant professor level, in geographic information systems. Applicants should have completed their doctorate by the date of appointment in a relevant field such as forestry, geography, geology, remote sensing, landscape architecture, ecology, or computer science. Teaching responsibilities will include a comprehensive, masters-level course in GIS for natural resource management, and one or more advanced graduate courses. Research interests in applications or development of GIS for interdisciplinary natural resource management are preferred. Opportunities for collaborative work in parallel computation exist with the Department of Computer Science. To apply, send a letter stating teaching and research goals, curriculum vitae and transcript, the names, addresses, and telephone numbers of three references and at least one example of recent work (e.g., reprints, manuscripts, or research proposals) to: **Professor Clark S. Binkley, GIS Search Chair, Yale University, School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, CT 06511; telephone: 203-432-5136.** A complete application packet should arrive no later than 1 March 1989. The position is available 1 July 1989 and is for an initial term of 3 years.

Yale University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITION IN MICROBIOLOGY UNIVERSITY OF ALASKA FAIRBANKS

The Department of Biology and Wildlife and the Institute of Arctic Biology at the University of Alaska Fairbanks invite applications for a tenure-track joint faculty position at the assistant or associate professor level. Anticipated starting date is September 1989. Candidates must have a Ph.D. in microbiology. The appointee will teach up to three courses per year at introductory, advanced undergraduate, and graduate levels, advise undergraduate and graduate students, and carry out an active research program in microbiology appropriate to the northern environment. Send curriculum vitae, a statement of teaching, research experience and interests, reprints of relevant publications, and three letters of reference to:

Dr. S. F. MacLean, Chair
Microbiology Search Committee
Department of Biology and Wildlife
University of Alaska
Fairbanks, AK 99775-0280

Closing date for this position is 15 February 1989.

FACULTY POSITION IN QUATERNARY SCIENCES

Applications are invited for a new tenure-line academic-year assistant or associate professor level faculty position at the Institute for Quaternary Studies at the University of Maine. Of interest are candidates who will complement established groups in archaeology, paleoecology, glaciology, and glacial geology. For example: geoarchaeology, geomorphology, paleoclimatology, stable isotopes, geochemistry, and vertebrate paleontology.

Preference will be given to candidates with a strong research and teaching record. He or she will be expected to obtain extramural research support and to develop a research program. Although the primary emphasis is on research, the position will have an undergraduate and graduate teaching component. The successful candidate will have a joint appointment between the Institute and an appropriate academic department. Application deadline is 1 March 1989.

Send applications, résumé and three references to: **Search Committee, Institute for Quaternary Studies, 304 Boardman Hall, University of Maine, Orono, ME 04469.** *Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION IN SOIL SCIENCE. The School of Forestry and Environmental Studies at Yale University invites applications for a faculty appointment, at the assistant professor level, in soil science. Applicants should have a doctorate in some aspect of soil science. Teaching responsibilities will include a comprehensive, masters level course in soil science for natural resource management, and one or more advanced graduate courses. Research interest in forest soils or soils of other natural communities is especially appropriate. Specific focus, however, could be in the physical, chemical, or biological aspects of soil science. To apply, send a letter stating teaching and research goals, curriculum vitae and transcript, the names, addresses, and telephone numbers of three references, and examples of recent work to: **Professor William H. Smith, Soils Search Chair, Yale University, School of Forestry and Environmental Studies, 370 Prospect Street, New Haven, CT 06511; telephone: 203-432-5149.** A complete application packet should arrive no later than 1 March 1989. The position is available 1 July 1989 and is for an initial term of 3 years.

Yale University is an Equal Opportunity/Affirmative Action Employer.

FLOW CYTOMETRY TECHNOLOGIST

Beth Israel Hospital Boston seeks an individual experienced in operation of fluorescent-activated cell analyzer and cell sorter instruments (FACS) with M.S. or B.S. and equivalent experience to collaborate with research investigators at a Harvard Teaching Hospital on research applications of the instrument. Will administer to the facility by assuming full responsibility for its maintenance and operation, and overseeing and coordinating its daily operation. For the above position, please send résumé to: **Doreen Gallagher, Human Resources, Beth Israel Hospital Boston, 330 Brookline Avenue, Boston, MA 02215.** *Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS SLOAN-KETTERING INSTITUTE CELL BIOLOGY AND GENETICS PROGRAM

The Sloan-Kettering Institute invites applications for several tenure-track junior and senior faculty positions in the cell biology and genetics program. This research program is one of four in the Institute, and is undergoing a major expansion in research at the molecular level on the areas of positive and negative growth control, differentiation, cell structure, intercellular recognition, and morphogenic pattern formation. The Cell Biology Program and the Molecular Biology Program at the Sloan-Kettering Institute are jointly relocating to a new research building which also houses advanced facilities for protein and nucleic acid microchemistry, transgenic mice, and automated mammalian cell micromanipulation. The faculty members of the Cell Biology and Genetics Program are also affiliated as faculty with the Cell Biology Graduate Program at Cornell University Medical School. The positions offered are highly competitive with regard to start-up funds, laboratory space, salary, and housing.

Eligible candidates should have a doctoral degree, postdoctoral experience, and demonstrate potential and ability to develop an independent, imaginative research program. Formal applications are invited from junior as well as established investigators. Applications should include curriculum vitae, a list of publications, a summary of research activities and research plan, and the names of three or more references. Applications should be addressed to: **Dr. Joan Massagué, Cell Biology and Genetics Program, Sloan-Kettering Institute, 1275 York Avenue, New York, NY 10021.**

FACULTY POSITIONS IN BIOLOGY UNIVERSITY OF ALASKA FAIRBANKS

The Department of Biology and Wildlife and the Institute of Arctic Biology at the University of Alaska Fairbanks invite applications for two tenure-track joint faculty positions at the assistant professor or, for exceptional candidates, associate professor level. Anticipated starting date is September 1989. Candidates should have a Ph.D. and postdoctoral experience. Preference will be given to individuals whose research will integrate with or complement that of existing faculty whose interests center around arctic/subarctic themes. *We particularly encourage women and other minorities to apply.* Closing date for both positions is 15 February 1989.

CELLULAR BIOLOGIST:

Successful applicant will be expected to teach primarily in the area of cellular biology and develop an active research program related to cellular biology. Send curriculum vitae, an explanation of research interests, and three letters of recommendation to:

Dr. Gerald F. Shields
Department of Biology and Wildlife
211 Irving Building
University of Alaska
Fairbanks, AK 99775

TERRESTRIAL VERTEBRATE BIOLOGIST:

Successful applicant will be expected to teach undergraduate and graduate courses including vertebrate anatomy and physiology. Preference will be given candidates with special technical skills in field research, such as biotelemetry. Send curriculum vitae, recommendation and three reprints of published work to:

Dr. Dale Guthrie
Department of Biology and Wildlife
211 Irving Building
University of Alaska
Fairbanks, AK 99775

HEAD of the Horticulture, Forestry, Landscape and Parks Department, South Dakota State University. Ph.D. or equivalent in one of the disciplines represented in the Department or in a closely allied field is required. Professor rank on tenure-track. Salary will be commensurate with qualifications. Contact: **Dr. Charles McMullen, Department of Biology, South Dakota State University, Brookings, SD 57007. Telephone: 605-688-6144.** Applications will be accepted until 6 March 1989 or position is filled. *South Dakota State University is an Affirmative Action/Equal Opportunity Employer (male/female). Women and minorities are encouraged to apply. Immigration eligibility required.*

NATIONAL SCIENCE FOUNDATION

NSF's *Divisions of Cellular and Molecular Biosciences* are seeking qualified applicants for Associate Director and Program Director positions under the provisions of NSF's Rotator Program. Since responsibilities include research proposal evaluation, budget development and specific research accomplishment are key qualifications. The positions are excepted from the competitive civil service and are filled on a one- or two-year rotational/temporary basis. The positions become available periodically and will be filled beginning in the summer or fall, 1989.

The salary ranges and qualifications are as follows:

Associate Program Director—\$41,121-\$64,778; Ph.D. or equivalent experience plus 4 or more years of research experience beyond the Ph.D.

Program Director—\$48,592-\$75,473; Ph.D. or equivalent experience plus 6 or more years of research experience beyond the Ph.D.

In *Cellular Biosciences*, there are openings in: (1) Cell Biology; (2) Developmental Biology; (3) Cellular Biochemistry; and (4) Physiological Processes. In *Molecular Biosciences*, there are openings in: (1) Genetic; and (2) Biochemistry.

Applicants should send resumes or SF-171, Application for Federal Employment, to: National Science Foundation, Personnel Administration Branch, Room 208, 1800 G. St. NW., Washington, DC 20550, Attn: Catherine Handle. For further information call Dr. Bruce Umminger, Cellular Biosciences (202) 357-7905 or Dr. James H. Brown, Molecular Biosciences (202) 357-9400. Hearing impaired individuals should call (202) 357-7492.

NSF is an Equal Opportunity Employer.

GRADUATE PROGRAM CELL AND MOLECULAR BIOLOGY (MULTI-DEPARTMENTAL)

- GENE REGULATION
- MOLECULAR GENETICS
- DEVELOPMENTAL BIOLOGY
- ONCOGENES AND GROWTH FACTORS
- STRUCTURAL BIOLOGY
- NEUROBIOLOGY
- MOLECULAR VIROLOGY AND IMMUNOLOGY

The Graduate School at BAYLOR COLLEGE OF MEDICINE has recently created a graduate program in CELL AND MOLECULAR BIOLOGY stressing basic research in the above areas. Students accepted for studies leading to the Ph.D. degree will receive financial support. For further information contact:

Dr. Savio Woo, Director
Graduate Program in Cell and Molecular Biology
Baylor College of Medicine, Room 185A
One Baylor Plaza
Houston, Texas 77030
Phone: (713) 799-6557

OPPORTUNITIES IN BIOTECHNOLOGY

Repligen Corporation is a leader in the application of Biotechnology to the health care market. We are currently developing an AIDS vaccine, AIDS therapeutic and diagnostic products, cancer therapies, and novel bioprocess reagents. We take pride in the high caliber of our scientific staff and our collaborations with major research institutions and corporate partners in Europe and the United States. The expansion of our effort has created the following opportunities:

Director of Process Development

We are seeking a broadly knowledgeable individual to direct a group of scientists in the scale-up and purification of recombinant proteins produced in *E. coli* and eukaryotic systems using cGMP documented guidelines. Candidates should possess a PhD in Biochemistry or a related biological science. A strong publication record and sound supervisory and interpersonal skills are required.

Repligen Corporation offers a competitive salary, excellent benefits, and equity participation. Please submit a cover letter, resume, and references to **Barbara Fleming, Recruiter, Repligen Corporation, One Kendall Square, Bldg. 700, Cambridge, MA 02139.** An Equal Opportunity Employer.

RepliGen

PH.D. SCIENTISTS PHARMACOLOGY RESEARCH

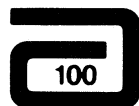
A renowned provider of quality health care products and services, Abbott Laboratories continues its commitment to research and is now approaching \$5 billion in sales. As a result of continued expansion in the discovery area of our Pharmaceutical Division, we currently have several opportunities for scientists to become part of a multidisciplinary team. Selected candidates will research novel agents and identify new approaches for the treatment of inflammatory and allergic diseases.

One position requires a Ph.D. in biochemistry, pharmacology, or a related discipline, plus post-doctoral experience. Previous lipid biochemistry experience is desirable.

A second position requires experience in establishing novel models to evaluate the actions of agents that interfere with the biosynthesis, and actions, of inflammatory or allergic mediators. A Ph.D. in pharmacology, immunology or a related discipline, and post-doctoral experience are required.

Abbott offers a stimulating, scientific environment, strong growth potential and an excellent compensation package that includes profit sharing. For consideration, please send your resume with salary history to: **Pat Handy, Corporate Placement, Abbott Laboratories, Abbott Park, IL 60064. Refer to Job #462-189 in your correspondence.** Abbott is an Affirmative Action Employer.

ABBOTT LABORATORIES



Quality
Health Care
Worldwide
1888-1988

POSITIONS OPEN

FOREST BIOLOGIST. Warren Wilson College, a liberal arts college in the Appalachian Mountains, seeks to fill a permanent position in forest biology. Other responsibilities include teaching conservation, plant taxonomy, general biology, and supervision of students in the management of 600 acres of college forest. Research with undergraduates is encouraged. Ph.D. required. Send curriculum vitae and application letter to: V. Collins, Warren Wilson College, Swannanoa, NC 28778 by 28 February 1989. *Equal Opportunity Employer.*

The Division of Research Immunology and Bone Marrow Transplantation of the Childrens Hospital of Los Angeles wishes to recruit individuals for a **JUNIOR FACULTY POSITION.** The successful candidate will be expected to establish an independent research program with external funding and to engage in the clinical bone marrow transplantation program of the Division. Previous clinical experience in the areas of hematology/oncology, immunology and/or infectious disease is required. Research expertise in the area of oncology, molecular biology and/or immunology is preferred. Candidates should send their curriculum vitae, names of three references and a brief description of their research interests to:

Robertson Parkman, M.D.
Head, Division of Research Immunology
and Bone Marrow Transplantation
Childrens Hospital of Los Angeles
4650 Sunset Boulevard
Los Angeles, CA 90027

The Childrens Hospital of Los Angeles and the University of Southern California, School of Medicine are Equal Opportunity Employers.

IMMUNOLOGIST to join active microbiology faculty. Non-tenure track, assistant professor September 1989 to June 1993 replace RCDA recipient. Possibility for renewal. Teach immunology for majors; introductory medical/general microbiology, or general biology; and graduate immunology. Appointee expected to develop vigorous research program. Postdoctoral experience preferred. Review of applications begins 13 February 1989. Send curriculum vitae, three letters of reference, statement of teaching/research interests to: **Immunology Search Committee, Dean of Biological Sciences, University of Montana, Missoula, MT 59812.** *Affirmative Action/Equal Opportunity Employer.*

LECTURER— VERTEBRATE AND FIELD BIOLOGY

The Program in Ecology, Evolution, and Behavior of the Department of Biology at Princeton University has a full-time opening or two half-time openings at the rank of lecturer for a 1-year renewable appointment beginning in September 1989. Duties include teaching a vertebrate biology laboratory course with a strong physiological component, teaching a field biology course, and advising the independent work of several undergraduates in these fields. The courses are given during the fall term, in collaboration respectively with **Robert Lisk** and **Henry Horn**, and there is time in the spring term for the candidate's own research. A Ph.D. in a relevant discipline is required. Applicants should specify whether they wish a half-time or full-time appointment. The closing date for applications is 3 March 1989. Applicants should send curriculum vitae and arrange for three letters of reference to be sent to: **Robert Lisk, Search Committee, Program in Ecology, Evolution, and Behavior, Guyot Hall, Princeton University, Princeton, NJ 08544-1003.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

MEDICAL MARKETING RESEARCHERS— Creative natural sciences or psychology Ph.D.'s/M.S.'s needed for entry-level positions in health care marketing research/consulting (starting salary high 20's to low 30's). Positions require analytic problem-solving ability, comfort in leading group discussions with M.D.'s, excellent writing skills (beyond journal articles) and some statistics. Our firm offers an interesting alternative to an academic career, utilizing your research skills in a creative and financially rewarding way. Send résumé and letter explaining clearly why you are applying (no phone calls) to: **J. A. Cohen, Ph.D., Research Group Manager, National Analysts, Division of Booz, Allen and Hamilton, Inc., 400 Market Street, Philadelphia, PA 19106.** *An Affirmative Action Employer.*



Yale UNIVERSITY

Vertebrate Developmental Biologist

Yale University Department of Biology wishes to appoint a Vertebrate Developmental Biologist at the Assistant Professorship level. The successful candidate should carry on a vigorous, independent research program, supervise the research of graduate students and postdoctoral fellows, and contribute to undergraduate teaching.

Send curriculum vitae, description of research interests, and the names and addresses of three referees by March 1, 1989 to: Chairman, Department of Biology, Yale University, P.O. Box 666, New Haven, CT 06511.

Yale University is an Affirmative Action/Equal Opportunity Employer.

TUMOR BIOLOGIST

The Head and Neck Tumor Biology Program of the Eastern Virginia Medical School is recruiting a faculty member at the Assistant/Associate Professor level. The successful candidate will have a joint appointment in the Departments of Microbiology and Immunology and Immunology and Otolaryngology—Head and Neck Surgery. Investigators with research interests in molecular and cellular aspects of cancer are encouraged to apply. Applications from individuals with research experience in head and neck oncology, oncogenes, *in vivo* models, steroid and polypeptide hormones/receptors, and cytogenetics are particularly welcomed. An active research program and extramural research support is desirable. Major responsibilities will be to administer an independent research program and to collaborate on research projects with other faculty members. The departments are undergoing a major growth phase, with a focus on cancer research, offering the successful candidates excellent incentives, including competitive salaries, significant start-up and supplemental research funds, laboratory space and state-of-the-art equipment. Please send curriculum vitae, three letters of reference and a description of your cancer research interests to:



Kenneth D. Somers, Ph.D.
Chairman, Search Committee
Head and Neck Tumor Biology
Program
Department of Microbiology and
Immunology
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, VA 23501

An Affirmative Action/Equal Opportunity Employer

Research Scientist/Toxicology

Triton Biosciences Inc., a subsidiary of Shell Oil Company, is a fully integrated pharmaceutical and diagnostics company focused on product development opportunities in the areas of cancer and other life-threatening diseases.

The successful candidate will coordinate toxicology studies for therapeutic compounds. Will design protocols, select contract laboratories, evaluate/summarize on-going studies and finalize reports for regulatory submission. You will also be responsible for ADME and mutagenicity studies. Prefer PhD with 0-2 years experience or MS with 5+ years experience.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits, including relocation assistance. For consideration, send CV. with salary history and references to: Triton Biosciences Inc., Box CG, 1501 Harbor Bay Parkway, Alameda, CA 94501. An Equal Opportunity Employer.



Triton Biosciences Inc.

PRESIDENT



TRINITY COLLEGE

The Trustees of Trinity College invite nominations and applications for the position of President.

Trinity College, founded in 1823, is an independent, coeducational, liberal arts and sciences institution in Hartford, Connecticut.

The President is the chief executive officer of the College, and should possess distinguished academic credentials and appropriate administrative experience.

Applications and nominations should be sent to:

Edward A. Montgomery, Jr., Chairman
Presidential Search Committee
TRINITY COLLEGE
300 Summit Street
P.O. Box 3500
Hartford, CT 06106

An Equal Opportunity/Affirmative
Action Employer

POSTDOCTORAL FELLOWSHIPS IN MOLECULAR AND CELL BIOLOGY

Postdoctoral Fellowships are available in the Genetics and Biochemistry Branch, National Institute of Diabetes, and Digestive and Kidney Diseases, National Institutes of Health. Applications are invited from individuals of the highest caliber with Ph.D., M.D., or M.D., Ph.D. degrees. Current research interests of the staff include:

- Biosynthesis and targeting of lysosomal enzymes, the reconstitution of the cellular protein folding machinery, and the molecular genetics of Tay-Sachs disease (**Rick Proia**)
- Eukaryotic DNA repair, molecular mechanisms of toxin action, and mechanisms of nuclear and cytoplasmic localization of proteins and nucleic acids in *Xenopus* (**Eric Ackerman**)
- Molecular mechanisms of homologous recombination in higher eukaryotes, the biochemistry of nucleic acid-protein interactions and the formation and recognition of DNA mismatches (**Peggy Hsieh**)
- Biochemistry of homologous recombination in eukaryotes and prokaryotes, immunoglobulin gene rearrangements in cell-free systems, gene targeting and gene disruption in mammalian cells and structure/function studies of the CD4 protein, the HIV receptor (**Dan Camerini-Otero**)

Interested candidates should send a letter stating their interests, their curriculum vitae and list of publications, and the names and addresses of three references to:

Dr. R. Daniel Camerini-Otero
Chief, Genetics and Biochemistry Branch
Building 10, Room 9D-15
9000 ROCKVILLE PIKE
National Institutes of Health
Bethesda, Maryland 20892
Telephone: (301) 496-2710



NIH is an Equal Opportunity Employer

PROJECT AND POLICY DEVELOPMENT ADVISOR

Oak Ridge Associated Universities is seeking an individual to serve as scientific/technical advisor to the President on new initiatives and directions, project development and coordination, resource utilization, proposals and presentations, and other special activities.

REQUIREMENTS:

Ph.D. in science or engineering with experience in scientific field (teaching, research, management) with capability and experience in interdisciplinary activities and operations, and negotiations and consensus building. Must be excellent writer, speaker/presenter, meeting coordinator, and able to get results with and through others. Send resume, salary history and requirements, and references to:

Employment Office
Oak Ridge
Associated Universities
P.O. Box 117
Oak Ridge, Tennessee 37831-0117
EOE/AA



ANTIBODY TECHNOLOGY SPECIALIST

Cancer Therapeutics

The Dow Chemical Company, in Midland, Michigan, is a recognized world leader in the chemical industry. Expanded research efforts in the area of cancer therapeutics and immunotherapy have created an immediate need within the Bioproducts Laboratory in the Central Research Department for a qualified Antibody Technology Specialist.

The successful candidate will have a Ph.D. and some postdoctoral experience with developing and testing antibodies. Familiarity with state-of-the-art discovery of monoclonals, immunoassays and immunochemistry is required. Research efforts will be directed toward obtaining and testing novel antibody specificities for our biotechnology-based cancer therapeutic program. The above candidates must also possess strong communication skills and a desire to carry out independent research while functioning as part of an interdisciplinary research team.

The Dow Chemical Company offers a stimulating work environment and a competitive salary and benefits package. For consideration, send your resume to: **Technical Recruiting, Department AT, The Dow Chemical Company, 1801 Building, Midland, MI 48674.** The Dow Chemical Company is an Equal Opportunity Employer.



POSITIONS OPEN

INSTRUCTOR OR ASSISTANT PROFESSOR—NEUROPHARMACOLOGIST. A tenure-track position for a neuropharmacologist with broad experience in neurosciences is available in the Department of Basic Sciences, University of Illinois College of Medicine at Peoria. Responsibilities: participate in curricular development and in teaching pharmacology to medical students and residents; conduct original investigations in neuropharmacology and related areas. Requirements: Ph.D. in neuropharmacology, neurochemistry, neurophysiology, biochemistry, or cell biology or an M.D. degree with appropriate biomedical training and/or experience; publication record in neurosciences; strong potential for extramural funding of research. A documented capacity for excellence in teaching medical students is preferred. A minimum of 2 years of postdoctoral experience is preferable. Position available 1 March 1989 or after. Salary and rank commensurate with qualifications. *The University of Illinois is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and names of three references to: **Phillip C. Jobe, Ph.D., Professor and Chair, Department of Basic Sciences, University of Illinois College of Medicine at Peoria, P.O. Box 1649, Peoria, IL 61656.** Applications will be received until the position is filled.

THE UNIVERSITY OF TENNESSEE MEDICAL CENTER AT KNOXVILLE (UTMC/K)

Two tenure-track faculty positions—**MEDICAL ONCOLOGIST/CLINICAL INVESTIGATOR** and **MOLECULAR IMMUNOLOGIST/PROTEIN BIOCHEMIST**—at the assistant/associate professor level for M.D./Ph.D. candidates available in the Department of Medicine's Human Immunology and Cancer Program. NIH- and ACS-supported clinical and basic science research with emphases on human light chain-associated renal and systemic diseases (multiple myeloma, amyloidosis, etc.) and B cell-related neoplasms (lymphoma, leukemia, etc.). The successful candidate will work in well-equipped, state-of-the-art basic and clinical research facilities including hybridoma/Mab, flow cytometry, protein sequence, and immunochemistry laboratories. These positions are immediately available and require a minimum of 3 to 5 years of postdoctoral experience and ability to conduct innovative research. For M.D. candidates, B.C./B.E. and eligibility for state licensure required. Excellent compensation (including fringe benefits) and academic rank commensurate with education and experience. The Knoxville area offers the scientific resources of the University of Tennessee and the Oak Ridge National Laboratory; recreational opportunities provided by the surrounding Great Smoky and Cumberland Mountains and extensive TVA lake system; and cultural amenities including a symphony and chamber orchestra, a major fine arts museum, opera, and theatre. Letter of application, curriculum vitae, and names and address of three reference sources should be sent to: **Alan Solomon, M.D., Professor of Medicine, and Head, Human Immunology and Cancer Program, University of Tennessee Medical Center/Knoxville, 1924 Alcoa Highway, Knoxville, TN 37920.** *The University of Tennessee is an Affirmative Action, Title IX/Section 504 Employer.*

MICROBIOLOGISTS. The Department of Biology at New Mexico State University (NMSU) invites applications for two tenure-track assistant professor positions starting August 1989. Applicants should be Ph.D. microbiologists with postdoctoral experience. The successful candidates will be expected to seek external funding, establish a vigorous research program in (i) applied microbiology or (ii) microbial physiology, and teach at the graduate and undergraduate levels. Current microbiology teaching and research areas include microbial physiology, genetics, pathogenicity, ecology, development, and ultrastructure. The Department of Biology offers B.S. degrees in biology and microbiology, M.S. and Ph.D. degrees in biology, and participates in an interdepartmental molecular biology graduate program. Applications will be accepted until 28 February 1989 and should include curriculum vitae, a summary of research and teaching interests, and the names, addresses, and telephone numbers of three to five references. Mail applications to: **Dr. Charlotte McCarthy, Search Committee, Department of Biology, New Mexico State University, Las Cruces, NM 88003.**

NMSU is an Affirmative Action/Equal Opportunity Employer. Minorities and women encouraged to apply.

POSITIONS OPEN

UNIVERSITY OF TASMANIA

Applications are invited from suitably qualified men and women for the following position:

LECTURESHIP IN PHYSICS (Reference 132/88)

The Department of Physics has a vacancy at the Lectureship level for a fixed term of 3 to 5 years in the first instance. The successful applicant will be expected to play an active role in both teaching and research. Proven research ability in an area of physics compatible with departmental programs is required. Commencing salary will be within the lecturers' scale \$30,737—seven increments—\$40,100 per annum. Information concerning the position and departmental research programs may be obtained from: **The Head of the Department, Dr. P. A. Hamilton, telephone: (002) 202419, Fax: (002) 202410.**

Application form, appointment conditions brochure, and information sheet available from: **The Staff Office Secretary, telephone: (002) 202013.** Applications quoting reference close with: **The Staff Officer, University of Tasmania, G.P.O. Box 252C, Hobart, Tasmania, Australia, 7001** on 3 February 1989.

The University is an Equal Opportunity Employer.

MICROBIAL ECOLOGY ASSISTANT PROFESSOR HARVARD UNIVERSITY

The Department of Organismic and Evolutionary Biology, Harvard University, invites applications for a faculty position in the field of microbial ecology, with special emphasis on symbiotic interactions between microorganisms and higher organisms. Candidates should have demonstrated excellence in research and a strong commitment to teaching at the undergraduate and graduate levels, including participation in courses in microbial diversity and ecology. Applications including curriculum vitae, statement of research interests, reprints, and three letters of reference should be sent by 1 March 1989 to:

Dr. Andrew H. Knoll
Chairman, Search Committee in Microbial Ecology
Department of Organismic and Evolutionary Biology
Harvard University
26 Oxford Street
Cambridge, MA 02138

Harvard University is an Affirmative Action/Equal Opportunity Employer.

MICROBIOLOGIST

Tenure-track assistant professor position August 1989. The department has an active, research-oriented Ph.D. program in cell-molecular biology; the candidate is expected to maintain an active and fundable research program in this area. Teaching will include an introductory microbiology course and an advanced course in the candidate's area of specialization. Ph.D. required, postdoctoral experience preferred. Candidates must have demonstrated a commitment to excellence in teaching and research. Send letter of application, curriculum vitae, and three letters of reference to: **Dr. William J. Brett, Chairman, Department of Life Sciences, Indiana State University, Terre Haute, IN 47809.** Application review will begin 13 February 1989. *Indiana State University is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR BIOLOGIST, cloning of *Bacillus thuringiensis* toxin genes. A contract position is available to work on the isolation, cloning and characterization of Bt toxin genes for eventual transformation of plants to confer genetic resistance to insects or other plant pests. The successful applicant will be based in an established and well-equipped molecular biology facility doing research on the molecular biology of viruses and will also interact with scientists involved in biological control of insects and expression of foreign genes in transgenic plants. The post is for a period of up to 3 years with salary up to NZ\$54,154, depending on experience. Air fares provided. For further information please contact: **Dr. P. D. Scotti, Pathology Group, Entomology Division, New Zealand Department of Scientific and Industrial Research, Private Bag, Auckland, New Zealand—Telephone: (09) 893-660 Telex: MARC NZ21623 Fax: (09) 863-330.** Applications should be submitted by 15 February 1989 and include curriculum vitae and names and addresses of two referees.

POSITIONS OPEN

MOLECULAR GENETICS THREE POSITIONS

We are looking for three individuals to staff a new molecular genetics and in situ hybridization unit at the Whitney Laboratory. One position will be at the senior postdoctoral level and will be filled by someone with broad experience in various aspects of molecular genetics. This individual will be responsible for overseeing the unit and providing technical advice to other investigators in the Laboratory. The two other positions are at the junior postdoctoral level. One will have experience in the techniques of molecular genetics and a desire to learn electrophysiology; the other will have experience in electrophysiology (preferably intracellular recording and whole-cell and single-channel voltage clamp) and a desire to learn molecular genetics.

The Whitney Laboratory is the Institute for Marine Biomedical Research and Biotechnology of the University of Florida, and an Equal Opportunity Employer. Contact: **Dr. Peter A. V. Anderson, The Whitney Laboratory, 9505 Ocean Shore Boulevard, St. Augustine, FL 32086.**

MOLECULAR IMMUNOLOGIST BRANDEIS UNIVERSITY

The Rosenstiel Research Center and the Department of Biology seek a tenure-track assistant professor in the area of the molecular biology of the immune system. Candidates should have a strong record of research accomplishments. Exceptional individuals at a more senior level will also be considered. Please submit curriculum vitae, including a description of research goals, and the names of three individuals who can supply letters of recommendation to: **Molecular Immunology Search Committee, Rosenstiel Center, Brandeis University, Waltham, MA 02254-9110, by 28 February 1989.**

Brandeis University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR MICROBIOLOGIST ASSISTANT PROFESSOR

The Department of Biological Sciences at the University of Wisconsin-Milwaukee seeks to add a tenure-track position to its molecular microbiology group. Research interest and postdoctoral experience in microbial gene organization and expression required. Competitive salary and start-up funds are available. Teaching responsibilities include undergraduate and graduate courses in microbiology. Applicants must provide curriculum vitae, reprints, a concise statement of research goals, and have three letters of recommendation sent to: **Chair, Molecular Microbiologist Search Committee, Department of Biological Sciences, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, WI 53201.** Closing date: 15 February 1989.

The University of Wisconsin-Milwaukee is an Affirmative Action/Equal Opportunity Employer.

MUSCLE PHYSIOLOGIST OR BIOMECHANIST

The Department of Kinesiology at the University of Colorado, Boulder invites applications for a tenure-track position available August 1989: either a muscle physiologist or a biomechanist. Preference will be given to candidates at the assistant professor rank, but candidates at all levels will be considered. Candidates for the muscle physiologist position should have a Ph.D., postdoctoral training, and a record of strong research accomplishment. Preferred areas of expertise include isolated working heart and skeletal muscle preparations and/or hind-limb perfusions. Candidates for the biomechanics position should have a Ph.D. with a strong background in biomechanics, demonstrated research experience, and experience in obtaining extramural research funding. Teaching experience at the undergraduate and graduate levels is desired for both positions. To apply, send letter of application, curriculum vitae, and three letters of reference to: **Dr. Dale Mood, Chair, Department of Kinesiology, Box 354, University of Colorado, Boulder, CO 80309-0354.** The deadline for receipt of applications is 1 March 1989. *The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities and disabled individuals.*

DIRECTOR

EPPLEY INSTITUTE FOR RESEARCH IN CANCER AND ALLIED DISEASES UNIVERSITY OF NEBRASKA MEDICAL CENTER

The University of Nebraska Medical Center invites nominations/applications for the position of Director of the Eppley Institute. The Eppley Institute currently has a multidisciplinary faculty of approximately 20 members holding joint appointments in various academic departments, and a total staff of approximately 120. It has been designated as one of 15 NCI Laboratory Cancer Research Centers and has received a Special Institutional Grant from the American Cancer Society. Graduate students and postdoctoral fellows are supported partially by an NIH Training Grant. The Director is responsible for all the activities of the Institute and reports directly to the Chancellor of the Medical Center.

The successful applicant should have an outstanding record of scientific accomplishment that would qualify him/her for the rank of Professor in a basic science department. The individual must be familiar with the activities of a modern health science center, cancer research funding programs and/or agencies, and have significant administrative experience. Evidence of an ongoing program in basic cancer research also is essential. Applicants should submit a current curriculum vitae and the names of three individuals who will serve as references. Closing date for receipt of applications/nominations is 15 February 1989. Applications/nominations should be sent to:

William O. Berndt, Ph.D.
Vice Chancellor for Academic Affairs
Room 5009 Conkling Hall
University of Nebraska Medical Center
42nd and Dewey Avenue
Omaha, Nebraska 68105

*The University of Nebraska Medical Center is an Affirmative Action/
Equal Employment Opportunity Employer.*

LOOKING FOR A CAREER CHANGE?

An editorial position at *Science* is available for a PhD biomedical scientist with a broad range of interests and research experience in one or more of the following areas: molecular pharmacology and physiology, pre-clinical sciences, structural biology, or eucaryotic molecular biology. We are seeking someone with at least two or three years of post-doctoral experience in quantitative aspects of the life sciences and publications in the refereed literature. Editors have varied responsibilities in manuscript selection ranging from solicitation to editing for clarity. Previous editorial experience is not required. This is a full-time position in our Washington offices.

Please send resume and list of publications with cover letter and salary requirements to:

Mr. Gregory Stokes
AAAS
1333 H Street, NW
Washington, DC 20005

EOE

Research Manager

CNS Neuropharmacology

As part of our recently announced phase of expansion, culminating in our move to new research headquarters at Stevenage, we now have a personal development opportunity for an experienced pharmacologist.

Working initially at Ware in Hertfordshire, you will take managerial responsibility for 2-3 teams of scientists in the Neuropharmacology Department engaged in the search for drugs to treat diseases of the Central Nervous System. As a member of the Research Management Committee for CNS therapeutic targets you will be expected to make a substantial contribution to the direction of research in this area. You will also take specific project responsibility for an interdisciplinary group concerned with the discovery of novel treatments for a particular psychiatric disease.

You should have six or more years' relevant post-doctoral research experience and a sound understanding of receptor pharmacology. You will have developed an interest in neuro- or psychopharmacological research and have several years' experience of supervising a research team in an industrial environment.

Remuneration for this senior appointment will be above average for the sector and the benefits package will include managed relocation assistance where appropriate.

Please send your curriculum vitae or apply for an application form to: Ted Smith, Senior Personnel Officer, Glaxo Group Research Ltd., Ware, Herts SG12 0DP. Tel: 0920 3993, ext. 2640. Please quote reference W88362.

Glaxo Group Research



POSITIONS OPEN

MOLECULAR BIOLOGY

Applications for a tenure-track position at the advanced assistant professor level are invited from scientists with experience in molecular biology. We seek applicants with sufficient experience to merit immediate consideration for promotion to associate professor with tenure. The appointee will be required to maintain an active research program and to teach a course and laboratory in molecular biology. Start-up funds and laboratory space are available for establishing a vigorous research program.

Oakland University is a state-supported institution situated on a 1,400-acre campus 25 miles north of Detroit. The Department of Biological Sciences is a well-equipped, research-oriented department in the College of Arts and Sciences.

Applicants should submit curriculum vitae, a description of their research plans, key reprints, and names of three references before 15 February 1989:

Dr. V. K. Moudgil, Chair, Search Committee
Department of Biological Sciences
Oakland University
Rochester, MI 48309-4401

Affirmative Action/Equal Opportunity Employer.

NEUROBIOLOGIST—A tenure-track position will be available in September 1989. Teaching duties include neurobiology, a junior seminar, and participation in the biology core sequence and in Allegheny's Liberal Studies Program. In addition to teaching, establishment of a research program and direction of student research projects is expected. Substantial research support is available on a competitive basis from funds provided by the Howard Hughes Medical Institute. We are seeking individuals with demonstrated excellence in both teaching and research, as well as a strong commitment to liberal arts education. The successful applicant will also be expected to contribute to the design of our new biology building. Send curriculum vitae, statements of teaching and research interests, three reference letters, and graduate transcripts to: **Dr. Glen Wurst, Chair, Biology Department, Allegheny College, Meadville, PA 16335.** Review of credentials will begin 15 February 1989. *Equal Opportunity Employer.*

OCCUPATIONAL MEDICINE/ENVIRONMENTAL HEALTH (OM/EH). Tenure-track faculty position for senior scientist to direct a newly established Southeastern Clinical OM/EH Evaluation Center at Emory University and an OM/EH educational track in Emory's MPH Program. Nominations and applications are invited from established clinicians Board Certified in OM and eligible for licensure in Georgia. Responsibilities include the direction, management, planning and development of an OM/EH Center and educational track committed to excellence in patient care, teaching and research. Also required are demonstrated leadership capabilities, previous academic, teaching, and administrative responsibilities, and a strong record in research. Salary is negotiable. Applications should include a current curriculum vitae, the names of three references, and be submitted by 1 February 1989 to: **Chair, Search Committee, Emory Department of Community Health, 69 Butler Street, SE, Atlanta, GA 30303-3219.** *An Affirmative Action/Equal Opportunity Employer.*

Ph.D. CHEMIST

The Miriam Hospital is seeking a Ph.D. chemist with background in red cell substitutes and noninvasive vascular physiology. This research scientist appointment will qualify in the faculty position of assistant professor within the Department of Surgery in the Brown University Program in Medicine. Job responsibilities will include laboratory activity directed at designing and evaluating hemoglobin-based red cell substitutes and devising techniques and new technologies for noninvasive physiology assessment of the peripheral vascular system. The minimum requirements are: a Ph.D. in science or engineering field, experience in design and/or evaluation of hemoglobin-based red cell substitutes and an understanding of the physiology of hypovolemia.

The Miriam Hospital is an Equal Opportunity/Affirmative Action Employer and encourages applications from protected and minority groups. Applications must be received by 1 February 1989. Please send curriculum vitae to: **A. G. Greenburg, M.D., Ph.D., The Miriam Hospital, 164 Summit Avenue, Providence, RI 02906.**

POSITIONS OPEN

ORGANIC CHEMIST: Applications are invited for a tenure-track position in the Chemistry Department at Whitman College, a private liberal arts college offering an ACS-certified B.A. A recent Ph.D. in chemistry is required. Duties include teaching organic lecture and laboratory courses, general chemistry laboratory, and direction of undergraduate research. Send transcripts, three letters of recommendation, curriculum vitae, and a description of teaching and research experience to: **D. L. Frasco, Chemistry Department, Whitman College, Walla Walla, WA 99362** by 15 February 1989. Rank and salary dependent on experience. *Whitman is an Affirmative Action/Equal Opportunity Employer.*

PHARMACOLOGY: University of South Florida (USF), College of Medicine. The Department of Pharmacology and Therapeutics invites applications for tenure-track positions at the appropriate level. Candidates are sought with research expertise in areas of biochemical or molecular pharmacology such as mechanism of action of biological response modifiers. The successful applicants will be expected to develop an independent research program with outside funding. The responsibilities of the positions include teaching medical students and a graduate student course. Please submit a résumé and concise statement of research interests, and arrange for five letters of recommendation to be sent to: **Diane H. Russell, Ph.D., MDC-9, College of Medicine, USF, Tampa, FL 33612.** Closing date is 15 February 1989. *The University of South Florida is an Affirmative Action/Equal Opportunity Employer.*

PHARMACOLOGY—MOLECULAR BIOLOGY

Applications are invited for a tenure-track faculty position in the Department of Pharmacology of the University of Alabama at Birmingham (UAB). Comprising the Medical Center, University College and the Graduate School, UAB is a dynamic institution which is ranked as one of the top twenty comprehensive health and research centers in the United States. The Pharmacology Department has a young well-funded faculty, is well-equipped and offers an excellent environment for research including competitive salaries, space and start-up funds. Applicants should have a relevant Ph.D. or M.D. degree, postdoctoral, or faculty experience and be committed to a productive, independent research program and excellence in teaching. Rank is open but assistant professor is the likely level of appointment. We are seeking outstanding individuals whose interests and background are in the application of modern techniques of molecular and cellular biology and biochemistry to important problems in pharmacology. Send curriculum vitae, a brief statement of research interests and three letters of reference to: **Dr. Elias Meezan, Chairman, Department of Pharmacology, University of Alabama at Birmingham, Birmingham, AL 35294.** *UAB is an Equal Opportunity/Affirmative Action Employer.*

PHYSICAL SCIENTIST—The Department of Natural Science at Castleton State College seeks applications for a tenure-track position in the physical sciences/science education. The ideal candidate will be a dynamic educator with a Ph.D. in chemistry (analytic, inorganic, atmospheric or environmental) or geology ("soft rock"). Strong candidates with a Ph.D. in science education will be considered. A background in secondary education and the ability to teach a variety of physical science courses may enhance the candidacy. Responsibilities will include teaching courses in the physical sciences and the education/supervision of student teachers. This person should be able to work effectively with colleagues/students and contribute to the vitality and growth of the department. Review of applications will begin on 6 February 1989. Send résumé and three letters of references to: **Dr. Patrick Keller, c/o Academic Dean's Office, Castleton State College, Castleton, VT 05735.** *Equal Opportunity Employer.*

PLANT PROTEIN BIOCHEMISTRY, POSTDOCTORAL ASSOCIATE, North Carolina State University, Raleigh, North Carolina to work on purification and characterization of proteins involved in lignin biosynthesis in forest trees. Please send résumé and names of references to:

Ronald Sederoff
Department of Biochemistry, Box 7622
North Carolina State University
Raleigh, NC 27695

POSITIONS OPEN

PLANT BIOLOGIST. Assistant professor (tenure-track) position available 1 September 1989. Ph.D. in biological (botanical) science. Responsibilities include: establishment of strong externally funded research program in botany; advisement of Master of Science and undergraduate students and instruction in courses that may include plant taxonomy, morphology, and introductory biology. Demonstrated evidence of effective teaching (at least 1 year of teaching experience as teaching assistant or equivalent), research and communication skills appropriate to a faculty member are required. Send curriculum vitae, transcripts, three letters of recommendation, and statement of teaching, research and professional goals. Applications must be received by 1 March 1989; only completed applications will be considered. Applications and inquiries should be directed to: **Dr. George Ahlgren, Department of Biology, University of Minnesota, Duluth, Duluth, MN 55812.** *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

PLANT MOLECULAR BIOLOGIST MCGILL UNIVERSITY

The Department of Biology invites applications for a tenure-track position in plant molecular biology. The successful candidate will be expected to develop a strong research program and to contribute to graduate and undergraduate teaching. The department has excellent facilities for plant growth and tissue culture.

The starting date will be on or before 1 September 1989. Rank and salary will be commensurate with experience.

Send curriculum vitae, statement of research interest, representative reprints, and have three letters of reference forwarded to:

Dr. Barid Mukherjee, Chairman
Department of Biology
McGill University, 1205 Avenue Docteur Penfield
Montreal, Quebec, Canada H3A 1B1

Deadline for applications is 15 February 1989.

POPULATION BIOLOGY INDIANA UNIVERSITY—BLOOMINGTON

The Department of Biology has a **FACULTY POSITION** open in any area of plant or animal population biology. We anticipate that this appointment will be made at the assistant professor level, but exceptionally strong applications from senior level candidates will be considered. *Women and minority candidates are especially invited to apply.* The successful candidate will be expected to conduct a vigorous, independent research program and contribute to teaching. Applicants should have postdoctoral experience and have demonstrated ability as creative scientists; persons who combine theoretical and experimental skills are preferred. They should send curriculum vitae, a description of research interests, including future plans, and arrange to have four letters of reference sent to: **Dr. Rollin C. Richmond, Population Biology Search Committee, Department of Biology, Indiana University, Bloomington, IN 47405 or FAX 812-335-6705.** Applicants at the senior level need only indicate their potential interest by writing or calling: (812-335-6871; Bitnet: Richmond@IUBACS) **Dr. Richmond.** Applications received before 15 February 1989 will be assured full consideration. *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE

We study a multigene family located in Balbiani rings on polytene chromosomes in salivary glands of *Chironomus*. These genes encode secretory polypeptides which assemble in vivo into an insoluble silk fiber. Current efforts are directed at (i) characterizing additional genes/proteins in this family and (ii) learning how secretory polypeptides assemble in vitro into silk. Applicants should have experience in one or more of the following areas: production of monoclonal/polyclonal antibodies; immunomicroscopy (fluorescence and EM); physical studies on synthetic peptides/proteins; DNA cloning/sequencing. Send curriculum vitae, summary of research experience and three recommendation letters to: **Dr. Steven T. Case, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** *Equal Opportunity Employer, M/F/H/V.*

**PUBLIC HEALTH SERVICE
ALCOHOL, DRUG ABUSE
AND MENTAL HEALTH
ADMINISTRATION
NATIONAL INSTITUTE OF
MENTAL HEALTH
NEUROPSYCHOPHARMACOLOGIST**

The Neuropsychiatry Branch of the NIMH, under the leadership of Dr. Richard Wyatt, is recruiting for a neuropsychopharmacologist. The individual selected will participate in ongoing basic science studies regarding the CNS effects of a variety of psychoactive drugs, with an initial focus on cocaine, caffeine, and nicotine. These studies will include examinations of the impact of these drugs on neurotransmitter-receptor systems and the design of animal models to assess behavioral effects. Applicants must have a doctoral degree in pharmacology or a related area, and preferably have specific experience in behavioral pharmacology.

Applicants may be accepted as Staff Fellows (\$20,000-\$38,000) or Visiting Fellows (\$20,000 - \$23,000). Staff Fellows must be U.S. citizens with a doctoral degree. Initial appointments are for two years, with further renewals possible. Visiting Fellows may be resident or non-resident aliens with a doctoral degree and no more than three years of relevant postgraduate experience. Visiting Fellows are appointed for one year with possible renewals for two additional years. Interested candidates should send a curriculum vitae, a brief statement regarding experience and research interests, and the names of 3 references to:

**Darrell G. Kirch, M.D.
NIMH Neuroscience
Center at Saint Elizabeths
2700 Martin Luther King Jr.
Avenue, S.E.
Washington, D.C. 20032
(202) 373-6097**



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The Sterling Research Group, the worldwide pharmaceutical research and development organization of Sterling Drug, Inc. announces an opening for a Sr. Research Scientist in its Immunobiology Department of its Great Valley, Pennsylvania facility.

An opportunity exists for an outstanding researcher to participate in Sterling Research Group's discovery program on monoclonal antibody immunoconjugates. Scientists who have achieved a record of excellence in the design, synthesis, and molecular characterization of immunoconjugates for *in vivo* use are invited to apply. We seek highly motivated individuals with superior bench skills, supervisory ability, and a desire to collaborate with other scientists in a team effort to develop novel agents for the therapy of cancer. This position requires a Ph.D. degree and postdoctoral experience.

We offer attractive salary and benefit programs and an exciting work environment based on a team approach to research and development.

Please send resume in confidence to:

Employment Relations Department PRAT

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RESEARCH SCIENTIST

The Upjohn Company, a recognized leader in the research and development of pharmaceuticals, is seeking a highly motivated scientist for our Drug Metabolism Research group. This scientist is to function as a member of the interdisciplinary teams to make innovative contributions in bioanalytical research projects aimed at discovery, selection and development of new pharmaceutical products. These projects include the development of specific and sensitive methods for the quantitative measurement of drugs, with special emphasis on proteins, peptides, and biologicals, and their metabolites in biological samples. These projects also include the advancement of new bioanalytical technology and the applications in biopharmaceutical and pharmacokinetic studies during lead-finding and pre-clinical phases of drug development.

This position requires a Ph.D., preferably with post-doctoral experience, in biochemistry, biotechnology, pharmaceutical sciences or a closely related field. Ability to plan and carry out or direct a group to conduct the development validation, and trouble shooting bioanalytical methods for peptides, biological products, and drugs and their metabolites in biological samples is essential. Previous experience in quantitative analysis using enzymatic, immunological, chromatographic, and other physico-chemical or biochemical methods in the pharmaceutical industry or academia is highly desirable. Excellent problem solving skills, oral and written communication skills, and the ability to initiate and conduct interdisciplinary research with others or independently are also required.

Upjohn is located in Kalamazoo in southwestern Michigan, midway between Chicago and Detroit and offers varied cultural events, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers personal and career advancement opportunities, a competitive salary commensurate with experience, comprehensive benefits and relocation assistance. For confidential consideration, please send your CV/resume to M. William Rex, The Upjohn Company, Corporate Employment, Kalamazoo, MI 49001. Please refer to advertisement number 23755-GA in your correspondence. We are an Equal Opportunity Employer M/F.

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POSITIONS OPEN

PLANT PHYSIOLOGIST

Gettysburg College, a highly selective liberal arts college, invites applications for a 1-year sabbatical leave replacement position for 1989 to 1990 at the assistant professor level to teach an undergraduate course in plant physiology in the spring and participate in the introductory biology course in the fall. Course load permits time for research. Please submit curriculum vitae, brief statement of research interests, and three letters of reference by 3 February 1989 to: **Dr. Sherman Hendrix, Department of Biology, Gettysburg College, Gettysburg, PA, 17325.**

Gettysburg College is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL FELLOWS. The Limnology Research Centre, McGill University has two openings. Area of aquatic expertise is open but applications in contaminant cycling or acidification, land-water interactions, or sediment biogeochemistry are especially welcomed.

Send curriculum vitae, statement of research interests, and arrange for three letters of reference by 1 March 1989 to: **Dr. J. Kalf, Department of Biology, McGill University, 1205 Avenue Docteur Penfield, Montreal, Quebec, Canada. H3A 1B1.**

Non-Canadians are encouraged to apply.

POSTDOCTORAL POSITION available immediately for NIH-funded biophysical studies of adrenergic receptor-G protein mechanisms using rapid kinetic and fluorescence spectroscopic methods. Receptor and G protein coupling [*Biochemistry* 27, 2374-84 (1988)], G protein membrane distribution, mobility and subunit interactions will be studied. Background in receptor methodology, protein purification or fluorescence spectroscopy desirable. Send curriculum vitae and names of three references to: **Dr. Richard Neubig, Department of Pharmacology, University of Michigan, School of Medicine, M6322 Medical Science Building I, Ann Arbor, MI 48109-0626.** The University of Michigan is a Nondiscriminatory Affirmative Action Employer.

POSITIONS OPEN

A position for a **POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE IN NEUROBIOLOGY** is currently available. Supported by an NIH grant through 1993, the project is studying interactions between axons and their target neurons in the developing auditory nervous system [see *Curr. Top. Develop. Biol.* 21, 309-340, (1987)]. The project involves experimental embryology, tissue culture, recording from and labeling neurons in brain slices, pharmacophysiology, and morphometric analyses. Experience in electrophysiology or tissue culture of neurons is desirable. The position offers competitive salary and benefits. *The University of Utah is an Equal Opportunity Employer.* Please send curriculum vitae and the names of three evaluators to: **Dr. T. N. Parks, Department of Anatomy, University of Utah School of Medicine, Salt Lake City, UT 84132.**

POSTDOCTORAL POSITION available immediately for molecular biologist/biochemist to study transcription and translation factors regulating ferritin synthesis in normal and diseased states. Available for up to 3 years. Please send curriculum vitae and letters of recommendation to: **Dr. Jim Drysdale, Department of Biochemistry, Tufts University, School of Medicine, 136 Harrison Avenue, Boston, MA 02111.**

POSTDOCTORAL POSITION available to study lipid transport in cellular and model membrane systems. Freeze fracture, monolayer, calorimetric and NMR techniques will be used to define cerebroside and ganglioside-induced changes in membrane structure that regulate interactions between glycolipid transfer protein and biological surfaces. Requires Ph.D. in biochemistry or related discipline, and preference will be given to individuals with experience in the above techniques. Salary is above NIH scale with fringe benefit package. Send curriculum vitae and names of three references by 1 March 1989 to: **Dr. Rhoderick E. Brown, The Hormel Institute, University of Minnesota, 801 16th Avenue N.E., Austin, MN 55912.** Telephone: 507-433-8804. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

POPULATION BIOLOGISTS

The Program in Ecology, Evolution, and Behavior of the Department of Biology at Princeton University plans to appoint two population biologists to begin in September 1989, one a tenure-track assistant professor, the other at an open rank. Preference will be given to candidates with a strong research program involving field work or theory in ecology and evolutionary biology. The current faculty of Princeton's Graduate Program in Ecology, Evolution, and Behavior are: **John Bonner, Jim Gould, Peter Grant, Henry Horn, Steve Hubbell, Marty Kreitman, Bob Lisk, Naomi Pierce, Dan Rubenstein, and Ted Sullivan.** The closing date for applications is 3 March 1989. Applicants should send curriculum vitae and arrange for three letters of reference to be sent to: **Dan Rubenstein, Search Committee, Program in Ecology, Evolution, and Behavior, Guyot Hall, Princeton University, Princeton, NJ, 08544-1003.**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS are available for summer research at the Mountain Lake Biological Station of the University of Virginia. The station is located in the mountains of southwestern Virginia. Proposals will be considered in population biology and evolution. Deadline for applications: 15 March 1989. Write to: **Director, Mountain Lake Biological Station, Room 251, Gilmer Hall, University of Virginia, Charlottesville, VA 22901.** *Equal Opportunity/Affirmative Action Institution.*

POSTDOCTORAL POPULATION RESEARCH. The Carolina Population Center invites applications for a postdoctoral fellowship to study interrelations of hormones and social behavior in normal adolescent boys and girls and adult women. Doctoral discipline open; 2-year appointment beginning any time is planned. Please contact: **J. Richard Udry, Director, Carolina Population Center, University of North Carolina, 123 West Franklin Street, Chapel Hill, NC 27516-3997** or telephone: 919-966-1710. *Equal Opportunity/Affirmative Action Employer.*



SUPERVISORY RESEARCH PHYSICAL SCIENTIST

\$48,592-\$63,171 per annum

(salary dependent upon qualifications)

The U.S. Army Cold Regions Research and Engineering Laboratory, Hanover, N.H., is recruiting to fill the position of Supervisory Research Physical Scientist, GM-14.

Duties: Serves as the Chief of the Geophysical Sciences Branch. Directs the activities of approximately 20 professional, technical, and support personnel engaged in basic and applied research in the following areas: effects of cold regions environments and backgrounds on electromagnetic and acoustic waves, seismic propagation, optical properties of materials, radiation exchange, and related phenomena. Performs independent research in a technical area related to the above.

Qualifications: Bachelor's Degree in a related field of science or engineering (Ph.D. preferred) plus at least three years appropriate management and research experience or graduate education. Candidates must have demonstrated technical competence and potential to function effectively in a research management position.

For information and application package, contact Susan Koh, Personnel Management Specialist, U.S. Army Cold Regions Research and Engineering Laboratory, 72 Lyme Road, Hanover, NH 03755-1290 or (603) 646-4500.

Closing Date: January 27, 1989.

An Equal Opportunity Employer

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE MEDICAL BIOTECHNOLOGY CENTER

Molecular Neurobiologist

The Medical Biotechnology Center of the Maryland Biotechnology Institute, in conjunction with the Department of Neurology, University of Maryland Medical School, is seeking a full-time, tenure-track investigator with expertise in mammalian molecular biology. The position requires a Ph.D. degree with at least two years of relevant postdoctoral training and experience. Significant research accomplishment and the ability to obtain independent funding are essential. In addition to establishing an independent research program, the successful candidate will be expected to initiate and participate in projects involving molecular neurobiology. Particular focus will be on the identification, isolation, and characterization of genes and gene products associated with neurodegenerative diseases.

The Medical Biotechnology Center offers a creative and challenging scientific environment, with considerable opportunity for interaction and collaboration with cellular and molecular biologists representing a wide diversity of interests. The Center is a new facility utilizing state-of-the-art techniques and equipment in the pursuit of a broad range of basic and applied scientific projects.

The Department of Neurology has strong research programs in neuroimmunology, cerebrovascular disease and epilepsy. These interests, plus new initiatives investigating various neurodegenerative diseases, require significant expertise in the molecular biology of the nervous system. This position will allow active interaction with several young productive neuroscientists employing contemporary skills to evaluate disorders of the nervous system.

Salary and academic rank are commensurate with qualifications and experience. Applications should include a current curriculum vitae, a detailed statement of past experience and a one page description of future research plans and the names, addresses, and phone numbers of three professional references. The University of Maryland is an equal opportunity employer. Send all applications to:

**Maimon M. Cohen, Ph.D.
Acting Co-Director, Medical Biotechnology Center
University of Maryland at Baltimore
618 West Lombard Street—Second Floor
Baltimore, MD 21201**

BIOCHEMIST

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An industry-leading manufacturer has an opportunity for you in its R&D laboratories in the Richmond, VA area. You will be involved with performing studies in the field of biochemistry.

Experience in plant biochemistry and/or molecular biology is highly desirable. A background in protein purification, radioisotopic methods and immunochemical techniques would be beneficial. A graduate degree is required.

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POSTDOCTORAL FELLOW

Macromolecular Modeling

The Squibb Institute for Medical Research is recognized internationally as a leader in the research and development of novel bioactive compounds. We have recently established a Department of Macromolecular Modeling, with the aim of studying fundamental properties of biopolymers. We are offering a Postdoctoral Fellowship position in computer-aided study of protein structure.

You will conduct basic research focused on development of novel computational approaches towards binding energy calculations, and conformational searches as used in model-building. This work may be broadened into other areas of structure, energetics, and interactions of molecules such as, e.g., stereochemistry and complementarity of protein-ligand interactions, antibody specificity, and macromolecular design in general. The Department of Macromolecular Modeling uses the Squibb cluster of VAX 8700 computers, as well as its own MicroVax and Silicon Graphics workstations.

The activities of our Department will be coordinated with those of the Departments of Macromolecular Crystallography and Macromolecular N.M.R. Spectroscopy of the Squibb Institute. Joint research activities are currently under way between the institute and Princeton University, and are likely to involve the future Squibb Postdoctoral Fellows as well.

Qualified candidates should hold a Ph.D. degree in chemistry or related disciplines and have experience in computational structural science, computer programming, graphics, etc.

This position is based in Princeton, New Jersey, a pleasant semi-rural community located mid-way between New York City and Philadelphia. For consideration please submit curriculum vitae to: **The Squibb Institute for Medical Research, Human Resources Department 150, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



SQUIBB

POSITIONS OPEN

POSTDOCTORAL POSITION available to study root physiology for desert plants. Previous experience in root anatomy, water relations measurements, or simulation modeling required. Send curriculum vitae, summary of previous research experience, and names and addresses of three references to: **Dr. Park S. Nobel, Department of Biology, University of California, Los Angeles, CA 90024-1606.**

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

POSTDOCTORAL POSITION

To investigate the control of protein phosphorylation by insulin in muscle and fat cells. Available spring of 1989. Salary: commensurate with experience. Send curriculum vitae and three letters of recommendation to: **Dr. John C. Lawrence, Department of Pharmacology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** *Washington University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

Postdoctoral position available for 2 years to study tachykinin receptor structure and regulation. Experience in purification of membrane-bound proteins desirable. Send curriculum vitae and letter of application to: **Dr. Susan E. Leeman, Department of Physiology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655.**

POSTDOCTORAL POSITION available for candidate with background in one or more of the following areas: pharmacology, biochemistry, cell biology, immunology or virology. Candidate will participate in research on the evaluation of anti-viral drugs in HIV in vitro and in vivo systems (nonhuman primates). Studies will be supervised by **Dr. Jorg Eichberg.** Appointments are for 1 year periods up to 3 years. Annual salaries range from \$21,070 to \$29,265, dependent upon previous postdoctoral experience. Send curriculum vitae with names and telephone numbers of three references to: **Personnel Director (906), Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284.** *Equal Opportunity Employer M/F.*

POSTDOCTORAL POSITION AVAILABLE immediately for a Ph.D. in chemistry or biochemistry to investigate the molecular mechanism of interaction between cytochrome b₅ and cytochrome P-450, and the role of this interaction in the hepatotoxicity which occurs following administration of the anesthetics. Send résumé and names of three references to: **Dr. L. Waskell, University of California, San Francisco, VA Medical Center (129), 4150 Clement Street, San Francisco, CA 94121.**

POSTDOCTORAL POSITION BIOCHEMISTRY: To study reverse transcriptase and/or mechanisms of antiviral drugs. Ph.D. in biochemistry or related field required; experience with transcriptase and/or antiviral drugs preferred. Review of applications begins 3 February 1989. Send application letter, curriculum vitae, and three letters of recommendation to: **Dr. Thomas North, Biochemistry, Division of Biological Sciences, University of Montana, Missoula, MT 59812.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE—Position available for minimum of 1 year to study mammalian mitochondrial biogenesis and the role of DNA topoisomerases in this process. Project involves enzymologic and molecular biologic approaches so experience in recombinant DNA and/or protein biochemistry techniques is desirable. Send curriculum vitae and names of three references to:

**Dr. Frank J. Castora
Department of Biochemistry
Eastern Virginia Medical School
700 Olney Road
Norfolk, VA 23501**

Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN CELL BIOLOGY

Postdoctoral position available to study the role of lipoproteins in lipid metabolism using light and electron microscopy plus immunocytochemistry. Experience with in situ hybridization desirable. Send curriculum vitae and three references to: **Personnel, c/o Dr. R. W. Mahley, Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, San Francisco, P.O. Box 40608, San Francisco, CA 94140-0608.**

POSTDOCTORAL POSITIONS are available at the Guthrie Research Institute. Position 1: Regulation of macrophage cytokine secretion. Strong background in cell biology is essential, experience with signal transduction mechanisms is desirable (**Dr. D. Beezhold**). Position 2: Surface antigens (biochemistry/molecular biology) and mechanisms of NK and macrophage mediated cytotoxicity (**Dr. R. Hall**). Send curriculum vitae and names of three references to: **Guthrie Research Institute, Guthrie Square, Sayre, PA 18840.**

POSTDOCTORAL POSITIONS

Two postdoctoral positions are available, one to study the molecular mechanisms involved in transmembrane signal transduction in secretory cells and another to study cyclic nucleotide metabolism and its role in oral bacteria. Applicants should have experience in messenger regulation/enzymology/transport. Send curriculum vitae and names, addresses, and the telephone numbers of three references to: **Dr. Eileen L. Watson, Department of Oral Biology/Pharmacology, SB-22, University of Washington, Seattle, WA 98195.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE: To study effects of dietary fatty acids on arachidonic acid metabolism. Doctoral degree in biological science is required. This position is funded by NIH and will be in the Pennington Biomedical Research Center, a major new facility in the Louisiana State University System with the mission of improving human health through basic research in the nutrition field. Please send curriculum vitae and three letters of reference directly to: **Dr. Daniel Hwang, Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, LA 70808.** *LSU is an Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE POSITION: Available immediately for a Ph.D. to study the action of gonadal steroids in regulation of hypothalamic peptides and receptors, especially related to reproduction. Familiarity with neuroanatomy, neurochemistry and molecular biology techniques essential. Experience in neuroendocrine control of pituitary function is desirable. Submit curriculum vitae and three letters of recommendation to: **Dr. Satya P. Kalra, Ph.D., Professor, Department of Obstetrics and Gynecology, University of Florida College of Medicine, P.O. Box J-294 JHMHC, Gainesville, FL 32610.**



Ecogen Inc., an agricultural biotechnology company located in the Philadelphia area and specializing in microbial pesticide development and biological control has immediate openings for three **POSTDOCTORAL RESEARCH ASSOCIATES.** Areas of expertise and training desired are:

Molecular Genetics: Experience in bacterial molecular genetics (especially with *Pseudomonas*) required for the study of mechanisms of biological control of fungal plant pathogens by bacteria.

Biochemistry: Experience with protease biochemistry, protein purification, characterization required for the study of insect digestive physiology.

Fungal Physiology: Experience in biochemistry and/or physiology of fungi required for the study of fungal pathogens of insects for use as biocontrol agents.

Interested candidates for these positions 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.

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE IN GENE EXPRESSION

The named position is available immediately to study muscle gene expression in *Drosophila*. We are studying promoter and splicing function of contractile protein genes in transgenic flies and in vitro cell-free systems. Applicants must have a Ph.D., and experience in recombinant DNA methods is desirable. Starting salary is competitive. Send curriculum vitae and names of three references to: **Dr. Robert V. Storti, Department of Biochemistry, University of Illinois College of Medicine, 1853 West Polk Street, Chicago, IL 60612.**

Johns Hopkins School of Medicine. **POSTDOCTORAL RESEARCH POSITION** immediately available to study the regulation of acetylcholine receptors (AChRs) in skeletal muscle cells in a variety of model systems in vivo and in culture. Ph.D. or M.D. and some previous research experience required. Opportunity available immediately for qualified person. Send curriculum vitae and names of three references to: **Daniel B. Drachman, M.D., Department of Neurology, Johns Hopkins School of Medicine, 600 North Wolfe Street, 5-119 Meyer Building, Baltimore, MD 21205** or call 301-955-5406.

UCLA—POSTDOCTORAL TRAINING in Atherosclerosis Research. An interdepartmental training committee is soliciting applications for postdoctoral fellowships in atherosclerosis research, emphasizing human and molecular genetics, pathology, enzymology and lipid biosynthesis and transport. Qualifications include a doctorate in the sciences or medicine, two recommendation letters, and publications, if available. Qualified applicants will be contacted by a faculty sponsor, and together will plan a program of research and study. Final selection will be made by our Training Committee. *Women and other underrepresented applicants are strongly encouraged to apply.* Reply to: **Professor V. N. Schumaker, Molecular Biology Institute, UCLA, Los Angeles, CA 90024-1570.**

PUBLIC HEALTH SPECIALIST—To provide technical assistance to national AIDS committees and health providers in developing countries in the development and implementation of AIDS prevention activities. Requires M.D. plus M.P.H. (or equivalent degree or work experience) and 10 years of professional health care experience with specialization or experience in developing country programs. Good cross-cultural skills plus considerable knowledge of STDs and AIDS field with practical experience in intervention programs to prevent HIV infection. Ability to travel overseas required. Fluency in French and/or Spanish is required. Excellent benefits. Send résumé to: **Personnel, Family Health International, P.O. Box 13950, Research Triangle Park Branch, Durham, NC 27709.** *Equal Opportunity Employer/Affirmative Action.*

RESEARCH APPOINTMENTS at The Bureau of Engraving and Printing in Washington, DC. Several positions available for postgraduates, faculty, and graduate students to participate in research projects involving chemistry, physics and technology of papers and polymers, characterization of elastomers, thermal analysis, experimental design, process engineering and control, electronic engineering, optics, microscopy, spectroscopy, graphic arts, computer science, and artificial intelligence. Contact: **Research Participation Program/BEP, University Programs Division, Oak Ridge Associated Universities, Box 117, Oak Ridge, TN 37831-0117.** Telephone: 615-576-3190. Please indicate if interested in postgraduate, faculty, and/or student program.

RESEARCH ASSOCIATE

Conducts research on the biosynthesis of photosynthetic pigments; performs laboratory work; exchanges and secures information on biosynthesis of photosynthetic pigments; prepares oral and written reports; prepares research papers. Forty hours weekly; 9:00 a.m. to 5:00 p.m.; \$24,500 annual. Requirements: Ph.D. or equivalent botany or biochemistry; strong background in biochemistry or plant physiology; experience in enzyme biochemistry; experience in photosynthetic pigment biosynthesis. Please reply by résumé only to: **Maria Salabert, Rhode Island Job Service, 20 Mason Street, Providence, RI 02903. #833.**

RESEARCH ASSOCIATES/ ASSISTANTS

Cetus Corporation, a leader in the development of biotechnology-based health care products, has 3 positions open for Research Associates and Research Assistants in the Protein Chemistry Department.

These positions provide opportunities to conduct novel research on the isolation and characterization of native and cloned proteins to be used as pharmaceutical drugs in humans.

We require a Bachelors or Masters degree and a minimum of 2-3 years' relevant experience in protein chemistry. Preference will be given to candidates who demonstrate an understanding of molecular biology and/or immunology. Experience in the isolation and characterization of protein at the microgram level, preferably with HPLC, is also desirable.

Cetus offers excellent salaries, benefits, and unique advancement opportunities. For immediate consideration please send your C.V., including publications and references, to **Cetus Corporation, Box SCKK, 1400 Fifty-Third Street, Emeryville, CA 94608**. We are an Equal Opportunity Employer.



OPPORTUNITIES IN BIOTECHNOLOGY

Repligen Corporation is a leader in the application of biotechnology to the health care market. We are currently developing an AIDS vaccine, AIDS therapeutic and diagnostic products, cancer therapies, and novel bioprocess reagents. We take pride in the high caliber of our scientific staff and our collaborations with major research institutions and corporate partners in Europe and the United States. The expansion of our effort has created the following opportunities:

Research Scientist in Cell Biology

This scientist will manage the tissue culture and cell biology laboratory producing recombinant proteins in eukaryotic cells. Responsibilities will include directing research using cell-based assays to examine protein structure and function, and coordinating mammalian and insect cell culture. A Ph.D. is preferred with a history of research which applies protein chemistry or molecular biology training to cell biology questions.

Research Scientist in Virology

The successful candidate will participate in programs to develop vaccines, diagnostics, and therapies for retroviral infections. Responsibilities will include directing a group studying HIV neutralization and cell surface interactions. This scientist will also organize and supervise a BL-3 containment lab. The position requires a Ph.D. in Virology or other appropriate field with specialization in virology. Experience with human infectious agents is a must and supervisory experience is preferred.

Repligen Corporation offers a competitive salary, excellent benefits, and equity participation. Please submit a cover letter, resume and references to **Barbara Fleming, Recruiter, Repligen Corporation, One Kendall Square, Bldg. 700, Cambridge, MA 02139**. An Equal Opportunity Employer.

RepliGen



Faculty Openings

MIT's Department of Brain and Cognitive Sciences announces openings for junior faculty members in neurobiology. A successful candidate will be engaged in research related to neuroscience, e.g. cell and molecular biology of neurons, genetic specifications of neural development and behavior, or membrane biophysics. Requires a Ph.D. with substantive research in one or more of the above areas. Ability to teach undergraduate and graduate level courses and to develop a strong research program.

Interested applicants should send a Curriculum Vitae, a short statement of proposed research and the names of at least three references to: **Dr. Emilio Bizzi, Chairman, Department of Brain and Cognitive Sciences, Bldg. E25-526, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139**.

MIT is an Affirmative Action/Equal Opportunity Employer. Qualified minorities and women are encouraged to apply.
MIT is a non-smoking environment.

Massachusetts
Institute of Technology

RESEARCH SCIENTIST PHARMACOLOGY

Amgen is a dynamic, growing organization producing human therapeutic products through recombinant DNA technology. Our leadership in the development of Erythropoietin and Granulocyte Colony Stimulating Factor has placed us at the leading edge of the biotechnology industry. Our continued growth has created an immediate opportunity for a Research Scientist in our Pharmacology Group.

Applicants must possess a Ph.D. in Pharmacology or a related discipline with a strong background in whole animal research and experience in one or more of the following areas: inflammation, wound repair, immunopharmacology, hematology and oncology. Proficiency in statistical analysis of data is essential, and postdoctoral training is highly desirable.

Amgen offers a competitive compensation and benefits package, including equity participation, as well as a challenging and stimulating research environment. Our location one hour northwest of Los Angeles offers the best in Southern California living. Qualified applicants should direct a resume and a list of 3 references, in confidence, to:

**Recruitment, Dept. #372
AMGEN
1900 Oak Terrace Lane
Thousand Oaks
CA 91320**

Equal
Opportunity
Employer

AMGEN

POSITIONS OPEN

RESEARCH ASSOCIATE position available immediately to study the role of dopamine and dopamine receptors in modulating aqueous humor dynamics. Research will involve in vitro and in vivo techniques. Qualifications: Ph.D. in pharmacology, physiology or biochemistry. Please provide curriculum vitae and three references to: **Dr. David E. Potter, Ph.D., The Center for Biotechnology, Baylor College of Medicine, The Woodlands, TX 77381.** *Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE IN BRYOLOGY FARLOW HERBARIUM HARVARD UNIVERSITY

Applications are invited from systematists with Ph.D. in botany who are conducting research in bryology. Training and interests should include new or promising methodologies, techniques, or philosophies in systematic and evolutionary research. Primary responsibility will be to conduct an active research program in bryology, as well as to participate in administration and curation activities of the Farlow Herbarium bryophyte collection.

Appointment to be annual with possibility of up to 5 years. Applications including curriculum vitae, statement of research interests, reprints of recent publications and three letters of reference should be sent by 1 March 1989 to:

**Dr. Donald H. Pfister
Harvard University Herbaria
22 Divinity Avenue
Cambridge, MA 02138**

*Harvard University is an Affirmative Action/
Equal Opportunity Employer.*

RESEARCH ASSOCIATE IN QUANTUM OPTICS—Eugene, Oregon (\$23,500 per year). To engage in research involving cavity—atomic beam experiments. Experience with high vacuum technology, atomic beams, microcomputer interfacing, electronics, optical modulators, and Fortran programming is required. B.S. and Ph.D. degrees in physics, and 40 hours per week service are also required. Applicants should send a résumé and the names of three references to: **Employment Division, Attention: Job Order Number 2120485, 875 Union Street N.E., Room 201, Salem, OR 97311** by 20 February 1989. *An Equal Opportunity/Affirmative Action Employer.*

Major National Patent Law Firm located in New York City seeks highly qualified **SCIENTISTS** interested in second career opportunities in Intellectual Property law. Demonstrated technical writing skills essential. Competitive salaries and benefits and opportunities for challenging assignments. Send résumé to: **Box 10, SCIENCE.**

Applications are invited for a full-time **TENURE-TRACK POSITION IN SEDIMENTARY PROCESSES**. Applicants should have training in geology/geomorphology, and command of fundamental principles of sediment fluid dynamics. An interest in extreme hydrogeological events and an interdisciplinary approach are desirable. Send statement of interests, curriculum vitae and names of three referees by 1 March 1989 to: **Dr. William E. Odum, Chairman, Department of Environmental Science, Clark Hall, The University of Virginia, Charlottesville, VA 22903.** *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

SENIOR ASSOCIATE, ENVIRONMENTAL HEALTH INSTITUTE (EHI)

Full or associate professor level, M.D. or Ph.D. with strong credentials in environmental health-related research needed for principal position in not-for-profit think tank on the health effects of environmental agents. Candidate must be well published and a recognized leader in an environmental effects laboratory science, such as cellular or molecular biology, toxicology or pharmacology, or in a population-oriented area of health effects research, such as biostatistics or epidemiology.

EHI focuses on genetic-environmental interactions in its studies on the health effects of chemical and physical agents. The Institute is located in the Berkshires of western Massachusetts. *An Equal Opportunity Employer.* Contact: **Dr. Arthur Bloom, President, EHI, 742 North Street, Pittsfield, MA 01201.**

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR DEPARTMENT OF OPHTHALMOLOGY WASHINGTON UNIVERSITY IN ST. LOUIS

The Department of Ophthalmology, Washington University in St. Louis seeks candidates for research assistant professor. Must be M.D. or Ph.D. with 2 to 4 years of postdoctoral experience. No previous experience in eye research necessary, but should have experience in lymphokines, T-cell development, monoclonal antibodies, molecular biology, and/or protein chemistry. Strong ties are maintained with the large group of immunologists at Washington University. Candidate will participate in current ocular immunology research programs as well as develop his/her own research areas. Salary depends on experience. Send curriculum vitae and names of three references to: **Dr. Henry J. Kaplan, Department of Ophthalmology, 660 South Euclid Avenue—Box 8096, St. Louis, MO 63110.** *WU is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH SCIENTIST/ SENIOR RESEARCH SCIENTIST IN VITRO PLANT RESEARCH CSIRO—MILDURA, VICTORIA

CSIRO Division of Horticulture has a position available for a scientist to conduct in vitro plant research in the following areas: meristem culture for plant propagation and virus elimination, embryo and protoplast culture, and other in vitro techniques in the plant improvement program. An indefinite appointment with Australian Government Superannuation benefits is available. Applicants should hold a Ph.D., with experience in plant tissue culture methodologies. The Division may also consider in-house training in the appropriate techniques for a well qualified plant physiologist interested in developing this research area. Salary: A\$31,003 to A\$45,177 per annum. A higher salary may be available for a more experienced person. Duty statement and selection criteria available from: **Dr. R. Walker, telephone: Australia 6160-256-836; fax: 6150-256-823.** Applications quoting reference no. M88/1 to: **Chief, CSIRO Division of Horticulture, GPO Box 350, Adelaide SA 5001, Australia,** by 4 weeks from date of publication. *CSIRO is an Equal Opportunity Employer.*

SOCIAL MEDICINE CHAIR

The University of North Carolina at Chapel Hill invites nominations and applications for the position of Chair of its Department of Social Medicine. The 11-person faculty in Social Medicine carries out an extensive teaching program for medical students and residents in the medical humanities and social sciences, and in epidemiology and preventive medicine. The Department's research program includes a wide range of projects including prevention, chronic illness and disability, child abuse and neglect, social and medical ethics, medical care organization and health policy, and several other topics in the humanities and social sciences.

We seek an individual who has demonstrated significant accomplishment and leadership in both research and medical education, and who will build a strong, established, interdisciplinary department into a leading force in the School of Medicine, the University, and the disciplines involved. Candidates should hold a doctorate in medicine, in public health, or in a field of the humanities or social sciences. Applications and nominations, accompanied by curriculum vitae and other supporting material, should be sent before 15 February 1989, to: **Robert C. Cefalo, M.D., Chair, Search Committee for the Chair of Social Medicine, University of North Carolina at Chapel Hill, Office of the Dean, School of Medicine, 125 MacNider, CB# 7000, Chapel Hill, NC 27599-7000.** *Women and minorities are encouraged to identify themselves voluntarily. The University of North Carolina is an Affirmative Action/Equal Opportunity Employer.*

TOXICOLOGY/PHARMACOLOGY: ASSISTANT PROFESSOR. Tenure-track position beginning fall 1989. Ph.D. preferred. Teach undergraduate courses in toxicology, pharmacology, and additional courses in area of expertise. Industrial research possible in neuro-toxicology. Application deadline 15 February 1989. Provide evidence of quality teaching. Send letter, curriculum vitae, transcripts and three letters of reference to: **Dr. Duncan R. Jamieson, Dean, School of Sciences, Ashland College, Ashland, OH 44805.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH ASSOCIATE

Conducts research in growth factor gene regulation of mammalian cells; performs laboratory work including DNA sequencing, cloning genes, in situ hybridization, and in vitro transcriptions; prepares oral and written reports; prepares research papers. Forty hours weekly; 9:00 a.m. to 5:00 p.m.; \$27,000 annual. Requirements: Ph.D., zoology or botany; 2 years of experience in research involving isolation of clones; characterization of clones, and DNA sequencing; demonstrated ability by education or experience in Maxam and Gilbert and Sanger DNA sequencing methodologies, restriction mapping, Southern and Northern analyses, in situ hybridization and in vitro transcription and transfection vectors, and cytogenetic analyses in higher eukaryotes.

Please reply by résumé only to: **Maria Salabert, Rhode Island Job Service, 20 Mason Street, Providence, RI 02903. #835.**

RESEARCH ASSOCIATE on molecular and biochemical basis of drug action with emphasis on AIDS Therapeutics. Ph.D. with experience in enzymology or molecular biological approaches highly desirable. Salaries are commensurate with experience and begin at \$22,000. Start date is flexible. Send curriculum vitae and names of three references to: **Arnold Fridland, Ph.D., Department of Pharmacology, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38101.**

Bend Research, Inc. is a leading R&D company in membrane separations. The company is applying its technologies to therapeutic separations of blood and is seeking a director for a program in blood separations, with duties ranging from grant-writing to product development.

SENIOR SCIENTIST FOR PROGRAM IN BLOOD SEPARATIONS AND THERAPIES

Ph.D. or M.D. required plus at least 4 years of experience in relevant field; clinical aspects of hematology preferred; experience helpful in immunology, biochemistry, or biomaterials.

Competitive salary and benefits, beautiful location in Bend, Oregon. Entrepreneurial challenge in a high-quality scientific atmosphere. Send résumé and three references to: **Sharon Maier, Bend Research, 64550 Research Road, Bend, OR 97701-8599.** *An Equal Opportunity/Affirmative Action Employer.*

VERTEBRATE BIOLOGIST: Tenure-track associate professor, August 1989. Teach vertebrate, human and introductory biology. Emphasis on undergraduate teaching; research activity and publication required. Send résumé, cover letter, and three letters of recommendation by 1 March 1989 to: **Dr. Gerald J. Stine, Department of Natural Sciences, University of North Florida, Jacksonville, FL 32216.** *UNF is an Equal Opportunity/Affirmative Action Employer.*

VERTEBRATE ECOLOGIST

The Department of Biology at the University of Northern Iowa invites applications from individuals with a Ph.D. degree for a tenure-track position effective August 1989. The applicant's research must be in the ecology of birds or mammals and have a significant field component, with some preference given to those whose research is in the field of behavior. The research specialty should invite participation by graduate and undergraduate students. Teaching responsibilities typically include three courses per year from the following: Field zoology of the vertebrates, animal behavior, an advanced course in the applicant's specialty, and introductory biology. An opportunity is available for summer teaching and research at Iowa Lakeside Laboratory. The assignment is 75% teaching and 25% research, and the department expects excellence in both. Teaching experience or postdoctoral research preferred.

Applicants should send curriculum vitae, transcripts, a statement of interests and goals in both teaching and research, relevant reprints, and three letters of recommendation before 15 February 1989 to: **Dr. E. Russell TePaske, Department of Biology, University of Northern Iowa, Cedar Falls, IA 50614-0421.** *The University of Northern Iowa is an Equal Opportunity Educator and Employer with a comprehensive plan for Affirmative Action. The University specifically invites and encourages applications from women and minorities.*



**Department of Psychiatry
University of Toronto**

**CLARK INSTITUTE OF PSYCHIATRY—
UNIVERSITY OF TORONTO**

Positions are available for a new Positron Emission Tomography Facility at the Clarke Institute of Psychiatry, University of Toronto in late 1990. This facility will be dedicated to neuropsychiatric research and will be equipped with the Scanditronix 17Mev cyclotron and a seven slice camera.

CLINICAL CO-ORDINATOR—M.D. essential, nuclear medicine physician with experience in a PET facility.

RADIOCHEMIST—Ph.D. with experience in the synthesis and development of C-11 and F-18 radioligands including neurotransmitters and neuroleptics.

PHYSICIST—Ph.D., familiar with the methodology and instrumentation of PET and related imaging technology.

All the above are research and teaching positions with a University Appointment at the appropriate rank.

Address replies, with references to

Dr. Vivian M. Rakoff
Director and Psychiatrist-in-Chief
Clarke Institute of Psychiatry
250 College Street
Toronto Ontario
M5T 1R8
Canada

All applications will be considered. However, in accordance with Canadian immigration requirements, this advertisement is at first directed to Canadian citizens and permanent residents.

**SUMMER 1989
TEN ENVIRONMENTAL SCIENCE AND
ENGINEERING FELLOWSHIPS**

Applications Invited

The American Association for the Advancement of Science (AAAS) invites applications for ten Environmental Science and Engineering Fellowships available for summer 1989. The Fellows will work closely with the Environmental Protection Agency (EPA), Office of Research and Development, and other program offices, in Washington, DC, and assist in identifying and assessing the significance of long-range environmental problems and opportunities. The ten-week appointments are scheduled for 5 June through 11 August 1989. The awards will be announced prior to the end of April 1989.

Postdoctoral to mid-career scientists, engineers, and other appropriate professionals are encouraged to apply. Candidates may be from the physical, biological, or behavioral sciences, or any field of engineering or other relevant professional fields. They are expected to be critical thinkers, articulate, adaptable, and able to work with a variety of people from different professional backgrounds.

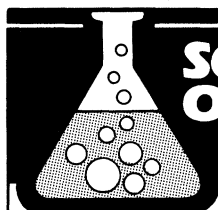
The 1989 Environmental Fellows will receive a taxable stipend of \$750 per week and a nominal additional amount for temporary relocation expenses and travel in connection with the fellowships.

A detailed, future-oriented research project will be conducted by each Fellow, which is of mutual interest to him or herself and the EPA. A project report will be submitted at the completion of the summer's work. Typical areas of research interest within EPA include: environmental risk assessment; biological pesticides; acid deposition; mobile source air pollution; oxidants, gases and particles; municipal waste water and spills; drinking water; hazardous waste; chemical testing and assessment; pesticides; radiation; and energy.

For further information and specific application requirements contact:

Environmental Science and Engineering Fellows Program
American Association for the Advancement of Science
1333 H Street, NW, Washington, DC 20005
Telephone: 202-326-6600

Deadline for applications is 1 March 1989



**SCIENTIFIC
OPPORTUNITIES**

Bio-dynamics is one of the world's foremost consulting toxicology research laboratories. We are located in central New Jersey and are currently

expanding our research and development efforts. We require scientific professionals in the following areas:

TOXICOLOGY STUDY DIRECTORS

Responsibilities include all aspects of study management including client consultation, program development, data review and interpretation, report preparation and regulatory interface. Requirements include a Ph.D. in Toxicology, Pharmacology or other related disciplines and 3-5 years of experience in general toxicology, Pharmacokinetics, drug metabolism or neurobehavioral toxicology experience a plus.

LAB ANIMAL MANAGER

Responsible for management of a large Technical staff involved in the implementation of toxicology studies including scheduling of manpower, allocation of equipment, ensuring adherence to good laboratory practices, protocols as well as quality and safety standards. Requirements include a B.S. degree in Biology, Toxicology or Animal Sciences and 3-5 years supervisory experience in a pharmaceutical, chemical or research and development organization engaged in research. Personnel management and organizational skills are essential.

All positions require the ability to effectively interact with all levels of management in addition to superior oral and written communication skills.

We offer a competitive starting salary, superior benefits package and the opportunity to join an organization that is on the forefront of toxicology research.

Please send a confidential resume including salary history and requirements to:

Personnel Manager—Dept. 5106



Bio/dynamics Inc.

Mettlers Road, PO Box 2360, East Millstone, New Jersey 08875-2360
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**Gastrointestinal Diseases
Research**

The Procter & Gamble Company in Cincinnati, Ohio, is seeking an entry-level Ph.D. physiologist or microbiologist to study the host-parasite interaction for gastrointestinal (GI) infectious diseases. The individual will work in a GI research group interested in understanding the mechanisms of bacterial pathogenesis. Preference will be given to individuals familiar with *in vitro* and *in vivo* models to study mucus production. Good communication skills and the desire to work in an interdisciplinary environment are also important requirements. Postdoctoral experience is desirable but not required. Applicants must be U.S. citizens or permanent residents. Send resume and publication list to:

Dr. T.J. Logan, Manager
Ph.D. Recruiting
GI Disease Research Position, Box S
THE PROCTER & GAMBLE COMPANY
Miami Valley Laboratories
P.O. Box 398707
Cincinnati, Ohio 45239-8707

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Procter & Gamble

POSITIONS OPEN

SCIENTIST

Program Resources, Inc. (PRI), the operations and technical support contractor to the National Cancer Institute's Frederick Research Facility, is seeking an individual with expertise in the molecular biology of cancer. You will be engaged in cloning a tumor suppressor gene(s) on human chromosome 3p that functions to suppress renal cell carcinoma and small cell lung carcinoma and possibly a host of other human cancers.

The duties will include: DNA and RNA preparation and manipulation, Southern and Northern analyses, preparation and screening phage cosmid and YAC genomic libraries, preparation and use of cDNA libraries. Also, isolation and sorting 3p probes, construction of a genetic linkage map of chr3p, mapping the Von Hippel Lindau (VHL) gene by RFLP deletion analysis, haplo-type analysis, somatic cell deletion/translocation hybrids, and genetic linkage analysis.

Ph.D. in chemistry or molecular biology with experience in protein chemistry and enzymology preferred. Knowledge of recombinant DNA technology, gene mapping, "reverse genetics" and/or cloning genes from a zero data base desired.

You'll work in a campus-like setting in Frederick, Maryland, near Baltimore and Washington, D.C. Plus, PRI offers a salary commensurate with credentials and an attractive fringe benefits program. For consideration, please forward curriculum vitae in confidence by 15 February 1989 to: **Barbara Norton-Gill, Technical Recruiter, Program Resources, Inc., NCI-FCRF, P.O. Box B, Frederick, MD 21701.**

An Equal Opportunity Employer, M/F.

VETERINARY/MEDICAL ENTOMOLOGIST

The Department of Veterinary Pathobiology, University of Illinois College of Veterinary Medicine announces a full-time, tenure-track assistant professor position in veterinary/medical entomology available now. Applicants should have a D.V.M./Ph.D. or Ph.D. degree with experience in veterinary or medical entomology. Duties include development of a strong research program, participation in professional and graduate teaching, and contribution to diagnostic services as needed. Opportunities for collaboration in vector-borne diseases research exist within the department and in the Illinois Natural History Survey. Salary is negotiable. Inquiries and letters of application, including curriculum vitae and names of three references, should be submitted to: **Dr. Uriel Kitron, Chair, Search Committee, College of Veterinary Medicine, University of Illinois, 2001 South Lincoln, Urbana, IL 61801; telephone: 217-244-6221.** To receive full consideration, application must be received by 1 April 1989.

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

ASSISTANTSHIPS

ASSISTANTSHIPS GRADUATE PROGRAM IN NEUROSCIENCE

The Neuroscience Program at University Hospital at The Milton S. Hershey Medical Center of the Pennsylvania State University has assistantships available in August 1989. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience. Participating faculty have established research programs in molecular biology of the nervous system, neurophysiology, neuroendocrinology, behavioral science, neuropharmacology, neurovirology, and cerebral blood flow and metabolism. Interested candidates are invited to apply to: **Dr. Robert B. Page, Director, Neuroscience Program, P.O. Box 850, Hershey, PA 17033.** *An Equal Opportunity/Affirmative Action Employer.*

TEACHING ASSISTANTSHIPS (including tuition waiver) available for qualified applicants beginning September 1989. Graduate study leading to M.S. or Ph.D. with concentration in biochemistry, botany, ecology, marine biology, microbiology, molecular and cellular biology, physiology, or vertebrate biology. For information, contact: **Dr. Richard L. Marsh, Graduate Coordinator, Department of Biology, Northeastern University, Boston, MA 02115.** *Northeastern University is an Equal Opportunity/Affirmative Action, Title IX Employer.*

POSITIONS OPEN

VISITING RESEARCH ASSOCIATE—Postdoctoral Research Associate to coordinate studies of wetland use for leachate treatment. Expertise in instrumental analysis and computer-based management essential. Two-year appointment begins 1 March 1989, with a later date negotiable. Starting salary is \$25,000 plus fringe benefits. Send curriculum vitae and names of three references to: **Dr. G. A. Moshiri, Department of Biology, The University of West Florida, Pensacola, FL 32514,** by 4 February 1989. **Telephone: 904-474-2079; 474-2754.** *Equal Opportunity/Affirmative Action Institution.*

EMORY UNIVERSITY WOODRUFF CHAIR IN MOLECULAR GENETICS

Emory University announces the creation of an endowed chair: the Woodruff Professorship in Molecular Genetics. An interdepartmental program in genetics exists in the Division of Biological Sciences and currently consists of over 25 faculty. Research interests represent most areas of modern molecular genetics encompassing a wide variety of systems ranging from the human to viral organisms and there is considerable collaborative interaction among the genetics faculty. The chair will be an independent unit reporting directly to the Dean of the School of Medicine and will include additional new faculty positions and an initial 5,000 square feet of newly constructed laboratory space as well as competitive seed funds and salary. Investigators with active research programs capable of providing campus-wide leadership in research and training in this discipline, including established investigators as well as those with unusual promise and a developing international reputation, are encouraged to apply.

Submit applications or nominations by 15 February 1989 to: **Woodruff Molecular Genetics Search Committee, Emory University School of Medicine, 1440 Clifton Road, NE, Atlanta, GA 30322.**

An Affirmative Action/Equal Opportunity Employer.

CALL FOR PROPOSALS

The Adirondack Foundation invites the submission of **PRE-PROPOSALS** for projects involving innovative uses of microbial populations for a variety of research goals. The descriptive part of the pre-proposal should not exceed three pages and should include specific project aims, personnel and budget. None of the monies awarded are to be utilized for administrative overhead. A complete curriculum vitae of the principal investigator, including past funding history, must be included. After review, selected pre-proposals will be returned and full research proposals requested. The Foundation intends to award a number of small (normally \$10,000 to \$30,000) grants to act as seed money for novel projects that may not be fundable through traditional sources. Deadline for submissions is March 1989. Send pre-proposals to: **Dr. James Wright, Research Director, Adirondack Foundation, Jay, NY 12941.**

FELLOWSHIPS

PREDOCTORAL FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

Applied Mathematics • Biochemistry • Biology • Biomathematics • Biomedical Engineering • Biophysical Sciences • Biostatistics • Chemistry • Computer Science • Cell Biology and Anatomy • Environmental Health • Epidemiology • Genetics • Immunology • Materials Engineering • Materials Science • M.D.-Ph.D. • Medical Genetics • Medical Psychology • Microbiology • Molecular Cell Biology • Neuroscience • Nutrition Sciences • Pathology • Pharmacology • Physics • Physiological Optics • Physiology • Virology

Well-funded faculty with diverse interests. Good post-graduation placement record. Above average stipends include payment of tuition. Ready access to Cray-XMP supercomputer. Special fellowship opportunities for minority students. Contact: **The Graduate School (A), University of Alabama at Birmingham, Birmingham, AL 35294; telephone: 205-934-8246.** *Equal Opportunity/Affirmative Action Institution.*

FELLOWSHIPS

INSTITUTE OF ECOSYSTEM STUDIES SUMMER RESEARCH FELLOWSHIPS

The Institute of Ecosystem (IES) will award one research fellowship for a 3-month period during summer 1989. These awards provide short-term opportunities for Ph.D.'s to do ecological research as part of the IES program at the Mary Flagler Cary Arboretum in Millbrook, New York. Awards provide summer stipend plus limited funds for research. Applicants should have a Ph.D., and be interested in collaborating with a diverse group of ecologists with an ecosystem focus. Send letter of application, curriculum vitae and names of three referees by 1 March 1989 to: **Dr. Steward T. A. Pickett, Institute of Ecosystem Studies, Cary Arboretum AB, Millbrook, NY 12454.** *An Equal Opportunity Employer.*

FELLOWSHIPS FOR RESEARCH AND TRAINING IN ECOLOGY UNIVERSITY OF MICHIGAN BIOLOGICAL STATION 14 June to 13 August 1989

Advanced undergraduate or graduate students and researchers with a Ph.D. may apply for fellowships in the Naturalist-Ecologist Training Program at the Biological Station in northern Michigan. All participants conduct independent ecological studies. Students enroll in one course of their choice and in another, Methods of Ecological Research. The latter emphasizes through hands-on experience the fundamentals of experimental research design, data management, statistical analyses, and communication of findings. Researchers concentrate on field-based studies, but must be willing to advise and interact with students in the Program. Awards for students cover tuition for both courses (ten graduate credits), fees, room and board. Researchers receive a \$2600 stipend, funds for equipment or supplies, fees, room and board, and an allowance for up to two dependents. For details and an application form, contact: **Dr. Mary J. Whitmore, University of Michigan Biological Station, Pellston, MI 49769.** Applications must be received by 24 February 1989.

GRADUATE STUDIES

PLANT AND FUNGAL MOLECULAR BIOLOGY. Faculty with research interests in plant or fungal biochemistry, molecular genetics, physiology and development invite inquiries from qualified applicants for graduate study leading to advanced degrees in biochemistry and botany. Full tuition and stipend. Write: **Dr. Robert C. Ullrich, Department of Botany, Life Science Building, University of Vermont, Burlington, VT 05405.**

TRAINING PROGRAM

The Department of Pharmacology and Molecular Sciences and the Anticancer Drug Development Program at the Johns Hopkins University School of Medicine offer **Ph.D. TRAINING PROGRAMS** fostering innovative, interdisciplinary research in the following general areas: (i) protein and carbohydrate structure/function, (ii) molecular biology and gene regulation, (iii) parasitology and virology, (iv) biomedical mass spectroscopy, (v) neuropharmacology, and (vi) design, synthesis, and testing of new drugs. Stipends are available for qualified applicants. Interested individuals are encouraged to contact: **Dr. Mette Strand, Director of Graduate Training, Department of Pharmacology and Molecular Sciences, Johns Hopkins School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205.** **Telephone: 301-955-7117.**

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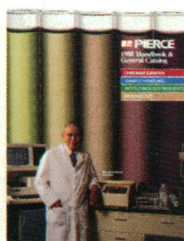
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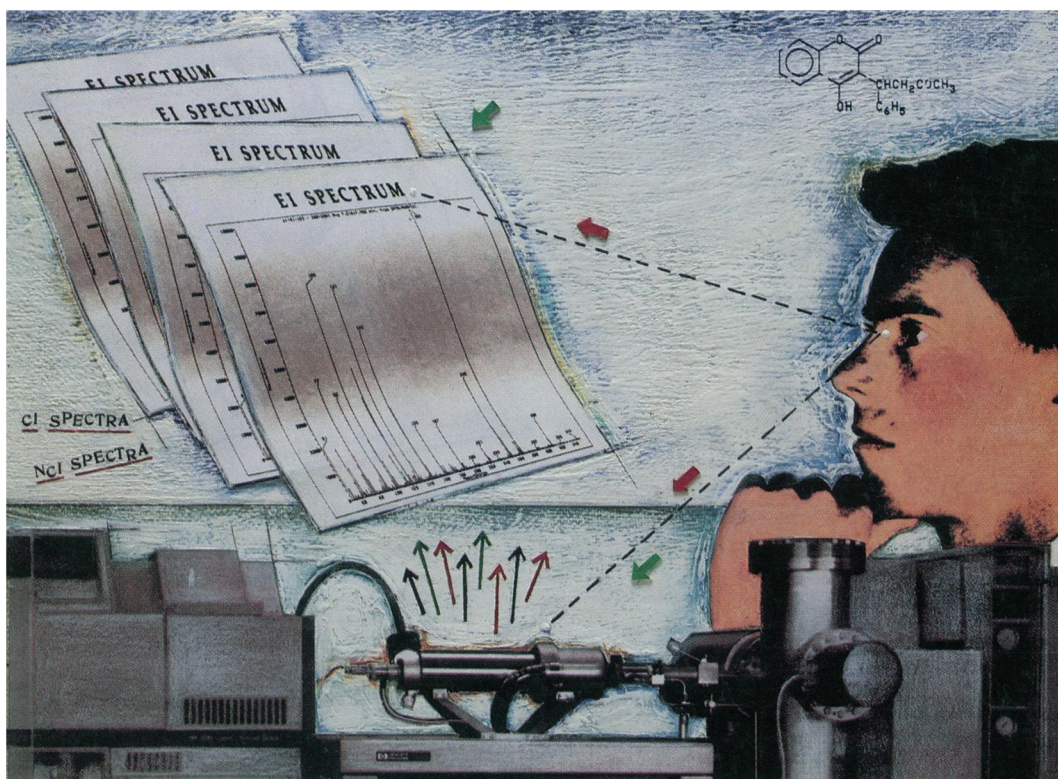
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