

year-old answers your question about what happened at school today with a bored "Nothing," be aware that the same child could give a very detailed account of what goes on in second grade. Hearing the response "Nothing" might be less frustrating if we understood it in the context of shared social knowledge to mean what the seven-year-old no doubt intends, "Nothing out of the ordinary."

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## Memoir of an Embryologist

**Autobiography of Dr. Karl Ernst von Baer.** JANE M. OPPENHEIMER, Ed. Science History Publications (Watson), Canton, MA, 1986. xviii, 389 pp. \$25. Resources in Medical History. Translated from the German edition (Braunschweig, 1886).

Even at their best scientific autobiographies are tantalizing material for the historian or more general reader wishing to understand the scientific process. On the face of it they ought to represent the most authoritative and intimate account of science as it really was. Yet their subjectivity and the imperfection of memory make them suspect especially when they appear most revealing. One therefore starts out marveling at the conviction that lies behind the selection for publication of a volume such as this: it is not only an autobiography that makes no claims to literary merit—and is self-confessedly rambling—but one that nobody has thought worth translating since its first appearance in German in 1864. What warrants our interest in it today?

Karl Ernst von Baer (1792–1876) is frequently cited as the father of modern embryology, and whatever the exact nature of his influence (among his many contributions he clarified the organization of germ layers, described the notochord and the mammalian egg, and began a recognizably modern discussion of the significance of the initial similarities of embryos of different species and of the implications of the epigenetic emergence of anatomical organization during embryogenesis), it is clearly important to the history of biology of the period that his contemporaries and immediate successors held him in the highest regard. In von Baer's time embryology was an integral and influential part of biology in general (roughly filling the niche that evolutionary theory and genetics occupy today), so his impact was widely felt. There is good evidence, for example, that von Baer's consideration of

the "transformations" from general to specific organization seen during vertebrate embryogenesis was an important influence on Darwin's thinking. T. H. Huxley described him as a "man of the same stamp" as Darwin. But his scientific work as such is perhaps a minor aspect of the interest of this book. The book has three components: in addition to a patchy, superficial, and often recriminatory account of his scientific life, there is an extensive annotated bibliography of von Baer's publications, which cover a wide ground including medicine, comparative anatomy, anthropology, and geography. Most extensively, the book records von Baer's thinking on subjects such as education, the organization of universities, and the position of intellectuals in Russia and Germany. In this may lie its greatest value. No doubt in large measure owing to the excellent translation, von Baer comes over in an extraordinarily immediate way: inevitably his science sounds primitive, but his discussions of aims in the understanding of biological phenomena and of the practical difficulties of doing highly original research read much as if they had been written in the 1980s.

Thus in many unexpected ways the courage shown by the publishers and the scientific editor has paid rich dividends. The autobiographical form becomes increasingly valuable as a resource with the passage of time precisely because it gets increasingly hard, in any other way, to identify the nature and origin of the traditions of scientific method, communication, and organization that we are often unconsciously constrained by. Material such as this is a uniquely direct reminder to us of how slowly science changes on levels such as these.

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The model 16 atomic absorption (AA) spectrophotometer can determine as many as 20 elements in a single sample before moving to the next sample. It has a 16-lamp turret that moves synchronously with the monochromator grating. With the addition of an Atomsource Atomizer, solid samples may be analyzed directly, with no need for prior dissolution. For easily atomized elements, the Atomsource yields characteristic concentrations similar to those of flame methods; however, the Atomsource is more sensitive to refractory elements than are flame methods. The model 16 may also be used as a conventional flame AA spectrophotometer. Analyte. Circle 582.

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### *LIMS Software*

Encompass is a laboratory information management software system designed to keep track of the normal progression of samples through the analytical laboratory. The user may control the software through menus or commands. Functions of the package include logging in samples; noting arrival of the samples in the laboratory; entering, approving, and reviewing results; and gen-

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erating reports. Samples and tests may be cancelled, and audit trails are created for any changes. Encompass operates on a DEC VAX computer with VMS 4.2 or later and with Smartstar 5.0. Chesapeake Software. Circle 584.

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The ADC-1 is a hardware system with 16 analog inputs, 4 digital inputs, 6 controlled outputs, and 32 power-line carrier control points. It can connect any RS-232-compatible computer to most sensors and instruments. The ADC-1 may be operated with many programming languages including C, BASIC, Pascal, and FORTRAN. For less critical applications, the ADC-1 includes a transmitter for remote control of BSR X-10 modules over alternating-current power lines. Remote Measurement Systems. Circle 592.

### *Operating System for Hard Disks*

TopDOS is an integrated disk operating system (DOS) and hard disk management system. Some commands simplify file and directory management. Other commands, such as MOVE, HISTORY, CLUSTER, and WHEREIS, take PC or MS DOS commands a step further. For example, Instant Editor with full-screen editing capabilities eliminates the need to use EDLIN or COPY CON:. Keyboard macros and aliases may be entered from the keyboard or loaded from files. TopDOS requires an IBM PC or compatible computer with at least 40 kilobytes of random access memory and DOS 2.0 or higher; the Compaq Deskpro 386 is also supported. Frontrunner Development. Circle 594.

### *Data Acquisition Software*

The data acquisition program ACQUIRE accepts input from instruments through one digital and four analog channels. Menus help the user set up the parameters for a sampling. Menu setups may be saved and recalled later for other experiments. If the acquisition is to begin later, a trigger may be activated by the user from the keyboard, by a discrete event from an instrument, or by a value of a selected analog channel passing a specified threshold. Incoming data may be time stamped. Acquired data may be displayed in real time in as many as four independent screen windows. Data may be transferred to many popular programs for statistical analysis and display. ACQUIRE operates on the IBM PC family of computers. Laboratory Technologies. Circle 591.

### *Literature*

*Rare Inorganic Chemical Catalog* features 170 pages of rare and less common inorganic materials, along with information on their formulas, typical purity, average particle size, chemical abstract numbers, and general safety data. CERAC. Circle 569.

*Scientific Glassware Since 1946* is a catalog of standard taper and spherical-jointed glassware and accessories, glassblowing supplies, high-vacuum valves, organic glassware kits, heating mantles, stirrers, and other laboratory accessories. Chemglass. Circle 571.

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# Personnel Placement

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**LINE CLASSIFIED ADVERTISING DEADLINES:**  
Thursday, 2 weeks prior to issue date (mailed on issue date).

**POSITIONS WANTED:** 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

**LINE CLASSIFIED (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth):** \$35.00 per line; \$350 minimum, per week (minimum charge covers one inch on a single column; one inch equals 10 lines of 52 characters and spaces per line). No charge for use of box number. No agency commission for ads less than 4 inches. No cash discount. Prepayment required for all foreign ads. Purchase orders and/or cover letter including billing address required for all other advertising.

Structure ad copy on a separate page, on lines of 52 characters and spaces. Include any desired heading. Each line of heading and/or extra spaces, and all partial lines are counted as full lines. To calculate cost, multiply total lines × \$35.00 = total cost of ad.

Send copy for all **Positions Wanted** ads and **Line Classified** ads less than 1/6 page in size (39 lines) to:

**SCIENCE Classified Advertising**  
1333 H Street, NW, Room 940  
Washington, DC 20005  
Telephone: 202-326-6555

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

**Scherago Associates, Inc.**  
1515 Broadway  
New York, NY 10036  
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

**Box (give number)**  
**SCIENCE**  
1333 H Street, NW  
Washington, DC 20005

## POSITIONS WANTED

**Biochemist, Ph.D.** 1980, experience in lipid analysis, phosphoinositide metabolism, ligand-binding assays, keenly interested in effects of disease and diet on signal transduction mechanisms, seeks research position, preferably in the Philadelphia-New Jersey-New York City region. Available fall 1987. Box 48, **SCIENCE**.  
4/24; 5/1

**Biochemist, Ph.D.** Innovative researcher interested in drug and vaccine discovery and development for infectious diseases. Research and teaching experience in industry and university. Extensive bibliography. Seeks research/teaching position in industry/university. Box 49, **SCIENCE**. X

**Biochemistry Ph.D./Immunodiagnosics or Protein Engineering:** Seeks industrial position. Three years' industrial experience in recombinant DNA technology, protein purification, protein/peptide chemistry, enzymology, macromolecular synthesis/analysis, immunology. Both academic and industrial publications. Excellent academic credentials, highly analytical, with supervisory skills. Available immediately. Box 53, **SCIENCE**. X

**Bioengineer/Physiologist, Ph.D.** Publications, patents, 30 years' academic industrial, government biomedical R&D experience, including basic and applied research, clinical investigation, teaching, product development, administration, patent litigation, and contract management. Desire free-lance professional assignments, long/short term. P.O. Box 9106, La Jolla, CA 92038. Telephone: 619-456-2565. X

## POSITIONS WANTED

**Biochemist, Ph.D.** Tissue culture, kidney and liver perfusion, animal studies, protein purification, enzyme kinetics, metabolism, transport, several publications. Teaching experience in biochemistry and physiology. Seeks research/teaching or industrial position. Box 52, **SCIENCE**.  
4/24; 5/29

**Environmentalism, M.S.** Field and laboratory experience. Seeks environmentally related research position. Willing to relocate. Box 51, **SCIENCE**. X

**Immunologist, Ph.D.** Six years' industrial assay development (FIA, EIA) and monoclonal antibody experience (4 years, management). Box 22, **SCIENCE**. X

## POSITIONS OPEN

### ANATOMISTS

The American University of the Caribbean School of Medicine located in Montserrat, British West Indies, seeks an anatomist to provide instruction to first-year medical students. Excellent salary and benefits. Send résumés to: Selection Committee(s), Medical Education Information Office, 2801 Ponce de Leon Boulevard, #800, Miami, FL 33134.

### ANATOMY UNIVERSITY OF SASKATCHEWAN DEPARTMENT OF ANATOMY

The Department of Anatomy, University of Saskatchewan, College of Medicine, invites applications for tenure-track position at the ASSISTANT PROFESSOR level. Applicants should have experience in teaching developmental biology to medical and science students as well as teratology and possibly neuroanatomy and/or gross anatomy. Background in molecular biology is desirable. Applicants should have proven research background and a strong research program. Application, including curriculum vitae, names of three referees, and an outline of proposed research should be submitted to: Dr. G. D. Burkholder, Department of Anatomy, College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

### ASSISTANT MEDICAL RESEARCH PROFESSOR

The Division of Genetics and Metabolism is seeking a biomedical mass spectroscopist to enhance an active and expanding research program. The initial appointment will be a nontenured, Assistant Medical Research Professorship. Responsibilities will include operation and maintenance of a VG 70-S mass spectrometer, participation in collaborative clinical and biochemical research, maintaining and expanding a service to other departments, and development of an independent research program. This is an excellent opportunity for the successful candidate, who is expected to hold a Ph.D. degree in chemistry or biochemistry and to have had at least 3 years of previous training and experience in mass spectrometry, preferably with high-resolution instrumentation. Interested candidates should apply in writing to: Dr. D.S. Millington, Box 3028, Duke University Medical Center, Durham, NC 27710 before 8 May 1987. *Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSORS:** Two tenure-track positions, one in biochemistry and one in analytical chemistry, starting fall 1987 or later. Successful candidates are expected to teach graduate and undergraduate courses, and to develop active research programs in areas not duplicating those of existing faculty. Applicants should have postdoctoral experience. Send a statement of research plan, curriculum vitae, copies of selected publications, and names of three references to: Professor Joseph E. Earley, Department of Chemistry, Georgetown University, Washington, DC 20057. *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

The Department of Psychiatry, University of California, San Diego, is seeking faculty candidates at the ASSISTANT PROFESSOR IN RESIDENCE OR ASSOCIATE PROFESSOR IN RESIDENCE level (nontenure track) with strong background and experience in behavioral medicine. The position is jointly funded by the San Diego Veterans Administration Medical Center and the University of California at San Diego. Candidates must have documented expertise in behavioral medicine, including the use of biofeedback therapy and the treatment of chronic lower back pain, have a strong track record in research, commensurate with their time and experience in the field. Experience in clinical settings and documented teaching skills are essential. In addition, clinical administrative experience is desirable. The level of this appointment will be determined upon academic qualifications and achievements. Candidates must hold a Ph.D. in clinical psychology from an APA-accredited program and must have completed an APA-accredited or VA internship in clinical psychology. To be eligible, candidates must qualify for Board certification/licensure within the State of California as a Clinical Psychologist. Salary: related to academic rank and step within the established salary schedule of the University of California, San Diego. Send curriculum vitae by 20 May 1987 to: Nelson M. Butters, Ph.D., Chairman, Behavioral Medicine Search Committee, Psychology Service (116B), Veterans Administration Medical Center, 3350 La Jolla Village Drive, San Diego, CA 92161.

*The University of California, San Diego, and the San Diego Veterans Administration Medical Center are Equal Opportunity/Affirmative Action Employers.*

**ASSISTANT PROFESSOR OF NEUROLOGY (NEUROSCIENCE)** tenure-track position available 1 September 1987. Qualifications include skills as teacher, at least 2 years of postdoctoral training and experience. Significant record of research accomplishment, and capacity to function as independent investigator. Interests and skills in mammalian cellular neurophysiology would be preferred; however, candidates with expertise in other disciplines such as neuroanatomy, molecular physiology/biophysics, and neuropharmacology might be considered. Space and start-up support available to interact in programs dealing with cortical development, epilepsy, neuronal structure, and membrane physiology. Send curriculum vitae and names of three referees to: D. A. Prince, Professor and Chairman, Department of Neurology, Stanford Medical Center, Stanford, CA 94305. *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages application from such candidates.*

**ASSISTANT PROFESSOR—VERTEBRATE PHYSIOLOGY** (Ph.D.). Tennessee Technological University is seeking a highly qualified vertebrate physiologist to fill a tenure-track position in the department of biology beginning September 1987. The individual will be expected to teach undergraduate and graduate level courses such as general physiology, comparative vertebrate physiology, and human physiology and anatomy. The individual will also be expected to direct the research of graduate students in the program and to develop an extensive program of research and scholarly activity. Candidates should have the Ph.D., have a demonstrated record of research activity, and be committed to excellence in teaching. Salary will be commensurate with experience and qualifications. Closing date is 15 May 1987 or until filled. *TTU is an Affirmative Action/Equal Opportunity Employer.* Interested persons should send letter of application, complete résumé, and the names, addresses, and telephone numbers of four references to: Dr. Winston P. Smith, Vertebrate Physiologist Search Committee, Department of Biology, Box 5063, Tennessee Technological University, Cookeville, TN 38505.

**ASSISTANT RESEARCH SCHOLAR.** To study macroscale vegetation dynamics in the African Sahel using remotely sensed satellite data. Ph.D. in geography and publication record required. Field knowledge of sub-Saharan grassland environments and experience in computer processing and analysis of satellite data essential. Experience of collaboration with national and international research organizations and working knowledge of French preferred. Applications to: Dr. S. Goward, Geography Department, University of Maryland, College Park MD 20742 (telephone 301-454-6578) by 1 June 1987.

## POSITIONS OPEN

### ASSISTANT PROFESSORS

The Diabetes Research Center jointly with Basic Science Departments of the University of Pennsylvania School of Medicine invites applications for two positions of tenure-track assistant professors in the areas of protein chemistry and of cellular stimulus response coupling. Applicants should have a strong theoretical and experimental background in biochemistry, a record of accomplishment in the forefront of problems related to protein chemistry and peptide synthesis or intracellular signaling processes and expertise in modern technologies relevant to these fields. Candidates should forward their curriculum vitae, a summary of research experience and interests, and arrange for three or more letters of reference to be sent to: **Dr. Franz M. Matschinsky, Department of Biochemistry and Biophysics, University of Pennsylvania, 302 Anatomy-Chemistry Building, Philadelphia, PA 19104-6059.** The deadline for applications is 1 July 1987. *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.*

### UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD) SCHOOL OF MEDICINE ASSISTANT RESEARCH PSYCHOBIOLOGIST DEPARTMENT OF PSYCHIATRY

The UCSD Department of Psychiatry is seeking applications from scientists who are in the early stage of their career, interested in the psychobiology of acquired immune deficiency syndrome (AIDS). Required is 2 years of postdoctoral experience in a relevant behavioral, social, or biological science and a demonstrated track record of scholarly work. The candidate will be expected to oversee a multidisciplinary study inquiring into the neurological, neuroradiological, and neuropsychiatric correlates of HIV infection. Demonstrated management skills are essential, as is familiarity with data management, including microcomputers and mainframes. Experience with major statistical packages, e.g., SPSS and BMDP, is essential. Salary based on University of California pay scales.

*The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

Send curriculum vitae and names of three individuals for recommendations by 15 May 1987 to:

**Igor Grant, M.D.  
Professor of Psychiatry  
University of California, San Diego: M-003  
La Jolla, CA 92093**

**ASSISTANT SCIENTIST.** Duties: conduct research and development of computerized electrochemical and optical detectors for HPLC; characterize glassy carbon and carbon fiber surfaces; develop automated HPLC system. Requires: Ph.D., analytical chemistry; hands-on experience in machine language program for IBM and Apple II PCs to drive devices, control instruments, and analyze data; hands-on experience in design and building electronic circuits for measuring very low level signals. Forty hours per week, \$28,000 per year. The job order number for this job opportunity is 980631. Please apply at: **Lawrence Employment Training Center, 833 Ohio Street, Lawrence, KS 66044-0589, telephone 913-843-0531, or refer to job order number when submitting a résumé to: Ervin McKinley, 512 West 6th, Topeka, KS 66603.** *Affirmative Action/Equal Employment Opportunity.*

### ASSOCIATE MEMBER

The Fox Chase Cancer Center invites applications from Ph.D. individuals with comprehensive experience in the field of tumor immunology for a key position in the center's Department of Surgical Oncology. This individual will coordinate the laboratory research activities for the Department and will be responsible for developing independent research projects within the Department.

Qualified candidates should possess a minimum of 5 years of related postdoctoral experience as well as a proven track record of independent funded research. Send curriculum vitae, three letters of recommendation, and a list of publications to:

**Director of Personnel  
Fox Chase Cancer Center  
7701 Burholme Avenue  
Philadelphia, PA 19111  
*An Equal Opportunity Employer***

## POSITIONS OPEN

Applications are currently being accepted for a position at the level of **ASSOCIATE PROFESSOR OR PROFESSOR** in the Department of Experimental Therapeutics and Grace Cancer Drug Center at Roswell Park Memorial Institute. Candidates will be expected to establish and lead a research program focused on the identification of the mode of action of anticancer drugs. Research and demonstrated leadership experience in biochemical pharmacology with a strong interest in cancer therapy is required. Inquiries should be addressed to: **Dr. E. Mihich, Roswell Park Memorial Institute, Buffalo, NY 14263.** *Equal Opportunity Employer.*

### ASSOCIATE, ASSISTANT OR FULL PROFESSOR OF OBSTETRICS AND GYNECOLOGY

The Department of Obstetrics and Gynecology, College of Medicine, University of Vermont, invites applications for a tenure-track faculty position. Candidates must have either a Ph.D. or an M.D. with a minimum of 3 years' postdoctoral experience in reproductive physiology and demonstrable research and teaching accomplishments. Preference will be given to applicants whose research complements ongoing programs in cardiovascular, metabolic, and endocrine areas. Academic rank will be based on prior experience and productivity. Interested individuals should submit curriculum vitae, a list of three professional references, and a brief statement of research interests by 1 July 1987 to: **Daniel H. Riddick, M.D., Ph.D., Chairman, Department of Obstetrics and Gynecology, MFU Patrick 541, Medical Center Hospital of Vermont, Burlington, VT 05401.** *Women and minorities are encouraged to apply.*

**BIOCHEMICAL ENGINEER—Meloy Laboratories,** the biotechnical research subsidiary of Rorer Group, Inc., is seeking a doctorate-level biochemical engineer to assist in the scale-up and feasibility evaluations of biologic drugs. Knowledge and experience with basic engineering fundamentals applicable to bio-processing is essential. A major requirement of this position will be the candidate's ability to demonstrate interest and academic training in the study of biologic systems. This hands-on position will offer an arena to express leadership and creativity and rapid career development. Meloy offers a competitive compensation program and an excellent benefit package. Interested candidates may submit their résumé, in confidence, to: **Ms. Linda Stewart, Personnel Manager, Meloy Laboratories, 6715 Electronic Drive, Springfield, VA 22151.** *Equal Opportunity Employer, M/F.*

### BIOCHEMIST/MOLECULAR BIOLOGIST

A tenure-track faculty position is available in the Department of Biological Chemistry, Dental Branch, The University of Texas Health Science Center at Houston. Applicants should have a Ph.D., postdoctoral experience, and an active research program, preferably utilizing molecular biological techniques to study problems concerning oral or related tissues. The applicant will be expected to develop an extramurally funded research program. Responsibilities include teaching dental and graduate students. Salary and rank will be commensurate with qualifications. *Equal Opportunity Employer. Women and Minorities are encouraged to apply.* Send curriculum vitae and names of three references to: **Dr. William T. Butler, Chairman, Department of Biological Chemistry, Dental Branch, University of Texas Health Science Center—Houston, P.O. Box 20068, Houston, TX 77225.**

**CELLULAR IMMUNOLOGIST:** Northwestern University Medical School—affiliated hospital. A full-time research position in human autoimmunity is available at the instructor or assistant professor level. Ph.D. in immunology and minimum of 3 years of postdoctoral research required. Applicants should provide curriculum vitae, copies of three most significant research publications, names, addresses, and telephone numbers of three references, and a statement of research interests to: **Dr. P. Y. Paterson, Chairman, Department of Microbiology/Immunology, Northwestern University Medical School, Ward Building 6-241, 303 East Chicago Avenue, Chicago, IL 60611.** *Northwestern University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### CARDIOVASCULAR ELECTROPHYSIOLOGIST AND MOLECULAR BIOLOGIST

The Department of Physiology, University of Manitoba, invites applications for two positions from investigators in the field of experimental cardiology to be appointed at the level of **ASSISTANT PROFESSOR** (contingent appointment) in the Division of Cardiovascular Sciences. The applicant must have a M.D. or Ph.D. degree and have 2 years of experience. Applicants with backgrounds in electrophysiology and molecular biology are encouraged to apply. The successful candidates will be expected to compete for local and national scholarship awards (for example, MRC) and develop their independent research programs as well as collaborate with other members of the department. Teaching in a graduate program will be a requirement. Please submit a copy of your curriculum vitae including an outline of your research interests and arrange for three letters of reference to be sent to: **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, Faculty of Medicine, University of Manitoba, Winnipeg, Manitoba, R3E 0W3 Canada.** Deadline for application is 30 June 1987. *Both men and women are encouraged to apply. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.*

### UNIVERSITY OF OTTAWA CHAIR OF BIOCHEMISTRY

Applications are invited for the position of Professor and Chairman of the Department of Biochemistry at the University of Ottawa School of Medicine. The successful candidate will have the responsibility of:

1) Organizing and directing the undergraduate teaching program in biochemistry and nutrition in the School of Medicine, the School of Nursing, and in the Faculty of Sciences;

2) Supervising education at the graduate level;

3) Conducting a strong research program in any one area of the discipline and acting as a resource person for other researchers.

The Department is at a crucial stage in its development. The person we seek should have outstanding communication skills, be able to provide assertive leadership, and be recognized by peers for excellence in education and research.

Suitable candidates should have an M.D. and/or Ph.D. degree, have at least 5 years of teaching experience and a research record of high quality.

*In accordance with Canadian Immigration requirements this advertisement is directed to Canadian citizens and permanent residents of Canada.*

An application, including curriculum vitae and appropriate references, should be forwarded, PRIOR TO 31 MAY 1987 to:

**Gilles D. Hurteau, M.D.  
Dean  
Faculty of Health Sciences  
University of Ottawa  
Ottawa, Ontario, Canada  
K1H 8M5**

### CURATORIAL INTERNSHIP NATIONAL ZOOLOGICAL PARK SMITHSONIAN INSTITUTION

Provides practical experience in the daily management of an exhibit collection of exotic animals (mammals, birds, reptiles, amphibians, and invertebrates), and experience in zoo administration, education, and conservation. Provides opportunity to conduct original research in a zoo.

Candidates must have a recent doctorate in life sciences; research or employment experience in zoology, environmental biology, or conservation; and a career interest in conservation, zoo administration, or conservation education.

Not to exceed 2 years beginning 1 September 1987, at \$18,000 per year.

Send introductory letter, curriculum vitae, reprints, and three letters of reference by 30 June 1987 to: **Benjamin B. Beck, General Curator, National Zoological Park, Washington, DC 20008.**

*All qualified candidates including qualified handicapped individuals with eligibility are invited to apply. The National Zoological Park, Smithsonian Institution, is an Equal Opportunity Employer.*



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## POSTDOCTORAL FELLOW

Postdoctoral position available in the Cellular and Molecular Biology Group, Biology and Medicine Division, Lawrence Berkeley Laboratory, involving research on growth regulation, differentiation and the possible role of oncogenes in the transformation of human mammary epithelial cells (see Hammond et al, PNAS 81: 5435, 1984, and Bartley & Stampfer, PNAS 82: 2394, 1985). Recent Ph.D. in biochemistry, molecular biology, biophysics or related field. Experience in molecular genetics and regulation of gene expression highly desirable. Experience in tissue culture desirable. Requires a demonstrated ability to perform research with a minimum of supervision. Applicants should send C.V., cover letter summarizing research experience, and two letters of recommendation to:

**Dr. Martha Stampfer, (Phone 415/486-7273), c/o  
Jacquelyn Schilling, Lawrence Berkeley  
Laboratory, Employment Office, 90-1042, #1  
Cyclotron Road, Berkeley, CA 94720.**

Please refer to Job #B/4132.

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## RESEARCH ASSOCIATES

### Cardiovascular Biochemistry/ Enzymology

The Squibb Institute for Medical Research, a recognized leader in the research and development of novel therapeutic agents, has three positions available for qualified individuals in the Department of Pharmacology. Applicants for all three positions should have experience in animal handling, tissue preparation, and in analytical instrumental techniques such as spectrophotometry and radioisotope methodology. Responsibilities will also include the collection, analysis, storage, and presentation of data. Candidates should have a M.S. or B.S. degree and 2 to 3 years of relevant laboratory experience.

1. The primary responsibilities for this position include the isolation and characterization of protein kinases. The successful candidate will also measure mechanical and biochemical changes in smooth muscle in vitro.
2. The scientist selected for this position will study the effects in vitro and ex vivo of inhibitors of zinc metalloproteinases such as angiotensin-converting enzyme and neutral endopeptidase. Responsibilities will include collaboration with pharmacologists and other biochemical investigators.
3. This scientist will participate in a research program directed toward the discovery and development of renin inhibitors. Specific responsibilities will include the design and application of procedures for the assay of enzyme and inhibitor activities in preparations ranging from purified enzymes to extracts of plasma and tissues.

The Squibb Institute is located in Princeton, NJ, a pleasant semi-rural setting convenient to both Philadelphia and New York. For confidential consideration, please submit your curriculum vitae to **The Squibb Institute for Medical Research, Human Resource Department 4342, Princeton, NJ 08540-4000. Please indicate which position you desire.** An equal opportunity employer.



# SQUIBB

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## POSITIONS OPEN

**CLINICAL IMMUNOLOGIST** sought for full-time position in independent laboratory engaged in histocompatibility testing and clinical laboratory services for ESRD patients. Individual should have a Ph.D. with specialization in clinical immunology. Experience in histocompatibility testing for transplantation and/or experience in the research and development of clinical products and methodologies is desirable. Salary commensurate with experience, excellent benefits, and a stimulating work environment. Send résumé in confidence to:

P.O. Box 24764  
Nashville, TN 37202

### DIRECTOR CHRISTENSEN RESEARCH INSTITUTE MADANG, PAPUA NEW GUINEA

Applications invited for above position. Independently funded institute devoted to research in marine and terrestrial biology. Applicants should have Ph.D. in a relevant subject and experience in working in tropical Third World environments. Salary PNG Kina 17,000 and residential and travel leave benefits. Send curriculum vitae and names of two referees by 5 June 1987 to: **Dr. Frank Talbot, Executive Director, The California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118-9961.**

**DIRECTOR, CLINICAL CHEMISTRY/ASSISTANT PROFESSOR:** A tenure-track position available for a Board-certified Ph.D. clinical chemist in a university hospital laboratory serving 1300 beds. Experience in a leadership position and evidence of research productivity essential. Teaching duties include resident training. Salary commensurate with qualifications and experience. Candidates must submit current curriculum vitae and three letters of recommendation to: **Bogdan Nedelkoff, M.D., Chairman, Search Committee, Department of Pathology, University of Louisville School of Medicine, Louisville, Kentucky 40292.** Application deadline is 31 May 1987. *The University of Louisville is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### COORDINATOR OF CONTRACEPTIVE DEVELOPMENT \$65,000 TO \$75,000

International nonprofit organization is seeking a biomedical scientist with managerial skills to manage a research and development program for new contraceptive methods. Ph.D., M.D., or equivalent experience. Understanding of good laboratory and manufacturing practices. Knowledge of regulatory agencies. Good writing and communications skills. Research experience in areas of endocrinology, pharmacology, and toxicology. East Side location. Excellent benefits. Send letter of application and résumé to: **Dr. C. Wayne Bardin, Vice President and Director, The Population Council, Center for Biomedical Research, Tower Building, 1230 York Avenue, New York, NY 10021, Equal Opportunity/Affirmative Action Employer.**

**DEVELOPMENTAL BIOLOGIST**—One year assistant professor to replace faculty member on leave. To teach undergraduate developmental biology course with laboratory in spring; fall course flexible. Opportunity for research. Department has 19 full-time faculty, over 200 junior and senior majors, and about 20 graduate students. Begins late August. Send curriculum vitae and names of at least three references by 8 May 1987 to: **Lawrence L. Wiseman, Chair, Department of Biology, College of William and Mary, Williamsburg, VA 23185. An Equal Opportunity/Affirmative Action Employer.**

**ECOLOGIST.** Tenure-track position beginning 15 August 1987, teaching biology, ecology, and interdisciplinary courses to students not majoring in the sciences. Ph.D. required. Send curriculum vitae, all transcripts and three letters of recommendation to: **Bruce MacLaren, Department of Natural Science, Eastern Kentucky University, Richmond, KY 40475 by 22 May 1987. Telephone: 606-622-2319. Eastern Kentucky University is an Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**DIRECTOR OF RESEARCH RESOURCES FACILITY**—D.V.M. licensed to practice in the District of Columbia with postgraduate training in laboratory animal medicine. ACLAM Diplomate or eligibility for certification desirable. Demonstrated interest and competence in research, administration, and communicative skills. The Director is responsible for the management, development, and accreditation of a new state-of-the-art animal facility consisting of approximately 25,600 gross square feet of floor area which serves the research and educational needs of the Georgetown University Medical Center. The position has administrative, secretarial, and staff support. The successful candidate is encouraged to develop his/her own research program and participate in collaborative research. Salary and academic appointment are commensurate with experience and qualifications. Position is available immediately. Send curriculum vitae and names of references to: **Dr. Peter A. Kot, Chairman, Search Committee, Department of Physiology and Biophysics, Georgetown University Schools of Medicine and Dentistry, 3900 Reservoir Road, NW, Washington, DC 20007. Georgetown University is an Equal Opportunity/Affirmative Action Employer.**

**DOCTORATES NEEDED** from many fields to provide intensive laboratory instruction to surgeons. Excellent teaching ability, congenial personality, and professional presence are necessary prerequisites. Training provided. Not a sales position. Some travel is required. Teachers will be based at permanent instruction sites in New York City, West Palm Beach, or Los Angeles area (Orange). Salary \$40,000. Write for application form to: **Director, Midas Rex Institute, 2929 Race Street, Fort Worth, TX 76111.** New applicants only, please.

**EDITOR** of prestigious scientific journal to oversee editing, production, and management of publication. Ph.D. in the pharmaceutical sciences, pharmacology, biochemistry, chemistry, or related sciences required. Established published research record highly desirable, 3 to 5 years of publication management experience required. **Box 54, SCIENCE.**

## DIRECTOR, RESEARCH INFORMATION SYSTEMS

The Upjohn Company, a worldwide producer of pharmaceutical, health care, and agricultural products, is seeking an experienced manager to fill the position of Director, Research Information Systems, a newly formed operating unit in the Pharmaceutical Research and Development Division. The successful candidate will work closely with the scientific and supervisory staffs of the Division to define, plan, implement, and maintain centralized computer-based information systems to serve the needs of the Division. The candidate must be knowledgeable in data-base management systems, purchased utility software, computer languages, data transmission, and applications software packages. Expertise in data-base concepts, organization, usage, maintenance, and performance is essential.

Applicants should have the equivalent of a Ph.D. degree in information science, computer science, or a closely related field; and a minimum of 10 years' experience, at least 3 of which must involve the supervision of professional personnel, preferably in a scientific research environment. An excellent reputation in the field is essential, as is a record of successful development of computerized information systems. This position requires the ability to integrate and control several diverse projects simultaneously in order to accomplish critical divisional and interdivisional information systems goals. A general knowledge of several scientific disciplines is necessary in order to communicate effectively with the scientific staff. Excellent interpersonal skills are required, as is the ability to communicate effectively orally and in writing.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers a competitive salary, commensurate with experience and an outstanding benefits program.

For confidential consideration, please call toll free 1-800-253-8600, ext. 3-6767, (inside Michigan collect 616-323-6767) to request an employment application. Please refer to ad number 20758-E when calling.

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## POST-DOCTORAL TRAINING IN TUMOR IMMUNOLOGY AND IMMUNOBIOLOGY

Post-doctoral fellowships are available for training in various aspects of cancer research, including host immunity, immunochemistry, monoclonal antibody, imaging and therapy, and molecular biology.

A strong background in cellular immunology, immunochemistry, protein chemistry, or molecular biology is desired. Applicants should send curriculum vitae, a short description of research interests, and the names of three references to:

**Dr. David V. Gold, Associate Member**

**CENTER FOR MOLECULAR  
MEDICINE AND IMMUNOLOGY  
at the University of Medicine  
and Dentistry of New Jersey  
One Bruce Street  
Newark, NJ 07103**

*An Equal Opportunity Employer*

## Senior Microbiologist Antibiotic Evaluation

The Squibb Institute for Medical Research is recognized internationally as a leader in developing novel therapeutic agents for the treatment of infectious diseases. We are currently seeking an experienced microbiologist who will be responsible for the microbiological evaluation *in vitro* of new antibacterial and antifungal agents.

Qualified individuals should have a Ph.D. in Microbiology and a minimum of 5 years industry or hospital experience. Proficiency in the evaluation of new antibiotics and a strong background in clinical microbiology are required.

This highly challenging opportunity demands a knowledge of standard testing methodology as well as a willingness to initiate new procedures. The individual will participate in both the research and clinical microbiology phases of our program.

Squibb is located in Princeton, NJ, a pleasant semi-rural setting convenient to both New York City and Philadelphia. In addition to an excellent salary and comprehensive benefits package, we can offer the opportunity for exceptional scientists to pursue stimulating careers.

For consideration, please submit your curriculum vitae to: **The Squibb Institute for Medical Research, Human Resources Department 507, P.O. Box 4000, Princeton, NJ 08543-4000.** An equal opportunity employer.



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## Ph.D. DRUG DELIVERY SYSTEMS

Norwich Eaton Pharmaceuticals, Inc. a Procter and Gamble Company, is seeking Ph.D. or Post-Doctoral level candidates with emphasis in Pharmaceutics, Physical Pharmacy, Pharmacokinetics, Physical Chemistry, Engineering or related sciences.

These positions require a highly-motivated professional with 0-3 years experience in dosage form development for oral and transdermal Drug Delivery Systems. Specific expertise in membrane technology and polymer sciences would be particularly desirable.

Norwich Eaton is located in a beautiful section of central New York in the Syracuse-Binghamton-Utica triangle, 200 miles northwest of New York City. Norwich Eaton offers a stimulating environment for professional growth coupled with a competitive employment package including paid relocation, and company health, dental and retirement benefits. Some of the Norwich Eaton Rx products include: Macrochantin, Dantrium, Vivonex, Entex L.A. and Buprenex.

*Please address all inquiries and C.V.'s to:*

**Nicholas W. Andrews**  
Personnel Representatives  
Norwich Eaton Pharmaceuticals, Inc.

17 Eaton Avenue  
Norwich, NY 13815

An Equal Opportunity Employer



## MOLECULAR AND CELLULAR BIOLOGY LABORATORY

Our biotechnology laboratory located in the University campus of Clermont-Ferrand is involved in the use of modern biology for improvement of plant varieties.

In order to complete our team of 14 scientists and technicians, we are looking for :

## A senior research scientist (ph D)

## A research scientist (MSc)

Applicants must have a strong research experience in the field of plant cell culture technic and somatic embryogenesis.

A reasonable fluency of French should be an advantage for the applicants. These positions are offered in Clermont-Ferrand a city of the French Massif Central with a very interesting scientific and natural environment.

Interested and qualified candidates are invited to submit curriculum vitae and references to :

**GROUPE LIMAGRAIN - Département du Personnel - BP 1 - 63720 ENNEZAT (FRANCE).**



Groupe Limagrain



**University of Alberta  
Edmonton**

## Assistant Professor Department of Zoology

1986-87 Salary Range: \$31,612 - \$45,340

A tenure track position is available in the area of Immunology.

Applicants must be highly qualified investigators capable of a vigorous independent research program, preferably with interests in molecular aspects of either the evolution of immune systems or immune responses to parasite infections. Minimally a Ph. D. degree or equivalent and postdoctoral experience are required.

The position will commence July 1, 1987 or as soon as possible thereafter.

In accordance with Canadian Immigration regulations, priority will be given to Canadian citizens and permanent residents.

Application deadline: June 15, 1987.

Please forward a curriculum vitae with a representative selection of reprints and names of three referees to:

**Dr. R.E. Peter, Chairman**  
Department of Zoology  
University of Alberta  
Edmonton, Alberta Canada  
T6G 2E9

The University of Alberta is an equal opportunity employer.



## POSITIONS OPEN

**ENDOWED CHAIR.** Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles (UCLA) School of Medicine, seeks appropriate candidates for **Della Martin Chair in Psychiatry**, endowed professorship for distinguished academic psychiatrist (English-speaking, eligible California licensure) committed to research especially on major mental illnesses of adolescents and young adults (for example, schizophrenia). Send curriculum vitae and letter discussing career goals to:

Arnold B. Scheibel, M.D., Chairman  
Della Martin Search Committee  
UCLA Neuropsychiatric Institute, B8-262  
760 Westwood Plaza  
Los Angeles, CA 90024

### ENVIRONMENTAL SCIENCES FACULTY POSITION MARINE ORGANIC CHEMIST OR ORGANIC GEOCHEMIST

To become part of an interdisciplinary department working primarily in coastal/estuarine systems. We anticipate an appointment at the rank of professor or associate professor, but applications will be accepted from well-established assistant professors. Excellent laboratories, facilities, and support personnel are available. The successful candidate will have demonstrated experience obtaining grants, teaching and directing graduate students, and will also have a strong publication record. Send résumé and cover letter to: **Chairperson, Search Committee, Environmental Sciences Program, University of Massachusetts/Boston, Boston, MA 02125-3393.** Applications received by 8 May 1987 will receive priority consideration. *An Affirmative Action/Equal Opportunity Title IX Employer.*

**FACULTY POSITION—IMMUNOLOGY.** The School of Dentistry, University of North Carolina (UNC) at Chapel Hill, has a tenure-track faculty position (Assistant to Full Professor) for a person with training and experience in modern immunology. Research generally relevant to oral biology would be an asset. Applicants should have documented excellence in conducting independent research and be able to compete for extramural research support. The position will provide excellent opportunities for teaching and research in the Dental Research Center and the School of Dentistry. The Dental Research Center is a dedicated research institute supporting basic and clinical research in a number of biomedical disciplines. In addition, it is expected that the individual chosen will receive a joint appointment in the Department of Microbiology and Immunology at UNC. Adequate start-funds will be available. Please send curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. Gunnar Bergenholz, Room 101, Dental Research Center, University of North Carolina at Chapel Hill, Chapel Hill, NC 27514.** Deadline for submission is 25 May 1987. *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN PHARMACOLOGY

The Department of Pharmacology, University of Missouri-Columbia, invites applications for tenure-track faculty positions. Successful candidates for assistant professor must have a Ph.D. or M.D. degree with several years of postdoctoral experience. Candidates for associate or full professor positions must have a distinguished academic record and extramural funding. One of the positions (assistant professor) is jointly recruited by the Department of Pharmacology and the Dalton Research Center, for which candidates should have expertise in cellular and molecular approaches to peptide hormone receptor regulation. For the other positions, all areas relevant to pharmacology will be considered, with preference given to candidates with background in modern molecular biology or cellular pharmacology related to membrane transport processes. Candidates will be evaluated on the basis of research and teaching potential or skill. Successful candidates will be expected to direct a strong research program and participate in the teaching of medical and graduate students. Salary will be commensurate with experience. Please send a brief description of research plans, curriculum vitae, and the names of three references to: **Dr. Hyun Dju Kim, Professor and Chairman, Department of Pharmacology, University of Missouri-Columbia, School of Medicine, M-517B Medical Sciences Building, Columbia, MO 65212.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**FACULTY POSITION IN BIOLOGICAL SCIENCES.** The Department of Biological Sciences, North Texas State University, solicits applications for a tenure-track assistant or associate professorship available 1 September 1987. Successful applicants will teach microbiology and closely related areas and must have a strong commitment to quality research and to obtain extramural funding. Candidates will be expected to develop strong research programs, participate in teaching undergraduates and graduates, and direct M.S. and Ph.D. students. Send curriculum vitae, reprints, statement of research objectives, and the names, addresses, and telephone numbers of three to five references to: **Search Committee, Department of Biological Sciences, P.O. Box 5218, North Texas State University, Denton, TX 76203.** *North Texas is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION THE PENNSYLVANIA STATE UNIVERSITY DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

The Department of Obstetrics and Gynecology of The Milton S. Hershey Medical Center of The Pennsylvania State University is seeking a biochemist with experience in protein chemistry/molecular biology and proven research ability to carry out studies on steroid receptor regulation in human endometrium. The appointment will be at the **INSTRUCTOR/ASSISTANT PROFESSOR** level beginning 1 July 1987. Applications, including curriculum vitae, description of research, and reprints, should be addressed to: **P. G. Satyaswaroop, Ph.D., Associate Professor, Department of Obstetrics and Gynecology, The Milton S. Hershey Medical Center, P.O. Box 850, Hershey, PA 17033.** *An Equal Opportunity/Affirmative Action Employer.*

### FACULTY POSITIONS IN PHYSIOLOGY AND BIOPHYSICS CASE WESTERN RESERVE UNIVERSITY (CWRU)

The Department of Physiology and Biophysics invites applications for tenure-track junior and senior faculty positions. Candidates with strong credentials in intracellular signaling and cellular regulation are especially encouraged to apply; however, outstanding candidates in all areas of cell physiology and biophysics will be given serious consideration.

Terms are highly competitive and appointments provide excellent opportunities to develop strong, independent research programs in newly built state-of-the-art facilities in an expanding department and research community.

Submit curriculum vitae, brief statement of present and proposed research interests, representative reprints, and names of four references to: **Dr. Antonio Scarpa, Department of Physiology and Biophysics, Case Western Reserve University, 2119 Abington Road, Cleveland, OH 44106.** *CWRU is an Affirmative Action/Equal Opportunity Employer.*

### FACULTY POSITION

The Department of Cellular and Structural Biology invites applications for two full-time, tenure-track positions at the level of assistant professor or associate professor. Primary concern will be given to individuals with research expertise in molecular genetics in the areas of mammalian gene expression, aging or endocrinology. We seek an investigator with promise of, or, with a record of scholarship and extramural funding success who will complement the research interests in our programs of genetics, aging, and endocrinology. The investigator is expected to build a strong sponsored research program, supervise graduate students and teach graduate level courses in his/her specialty.

Applicants should submit curriculum vitae, a statement of professional goals, a record of research support, names, addresses, and telephone numbers of at least three references by 1 August 1987 to:

Barbara H. Bowman, Ph.D.  
Professor and Chair  
Department of Cellular and Structural Biology  
The University of Texas Health Science Center  
at San Antonio  
7703 Floyd Curl Drive  
San Antonio, TX 78284

*An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**FREE-LANCE TRANSLATORS.** Paleontologists, vertebrate and invertebrate, to translate Russian articles into English. Must have excellent command of Russian and English. Write to: **Scripta Technica, Division of John Wiley and Sons, Inc., 7961 Eastern Avenue, Silver Spring, MD 20910.**

### LITIGATION SUPPORT

Major midwest law firm is seeking applicants for the position of **RESEARCH ANALYST.** Duties include: medical literature and medical records analysis; preparation of summaries of documents reviewed; preparation and communication of reports on medical issues; and preparation of positions on medical issues and documents for trial. Position requires some travel which may include several weeks during trials. This is a high intensity position with a challenging docket of assignments which requires a highly self-motivated individual.

This position requires an outstanding academic record, a graduate degree in biological, life, or biomedical sciences. A strong working knowledge of biostatistics and/or epidemiology is preferred. Excellent communication skills are essential. No legal education or experience required.

Please send a letter of application, complete college transcripts, a personal résumé, and references to: **Box 56, SCIENCE.**

### SCRIPPS INSTITUTION OF OCEANOGRAPHY/ MARINE GEOPHYSICS OR TECTONOPHYSICS

Applications are invited for one or more tenure-track or tenured faculty positions (assistant professor or associate professor level) in **MARINE GEOPHYSICS OR TECTONOPHYSICS.** Applicants must hold the Ph.D. degree and will be expected to supervise and conduct research in geophysical studies or tectonophysics with emphasis on the ocean basins and their margins. The position will also involve teaching and the supervision of graduate student research. The level of the appointment and salary will be commensurate with qualifications and experience, based on University of California pay scale. Assistant-level candidates will be expected to show evidence of their potential through letters of recommendation and a publication record appropriate for their experience. Associate-level candidates must show evidence of a strong research record in their specialization. Appropriate work or experience in geophysical exploration at sea is preferred. Send letter of application including description of research interests, list of publications, résumé of teaching experience and names of at least three references to: **LeRoy M. Dorman, Chair, Graduate Department, A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA 92093.** Closing date for applications is 30 June 1987. *An Equal Opportunity/Affirmative Action Employer.*

**MICROBIOLOGIST—**The Department of Pediatric Dentistry at The University of Texas Health Science Center at San Antonio invites applications for a full-time faculty, tenure-track position. Academic rank and salary will be commensurate with experience. Individuals actively engaged in research on problems in oral biology relevant to caries and periodontal disease are encouraged to apply; preference will be given to applicants with expertise in molecular genetics. Applicants will be judged on the potential to independently attract extramural funds. An ability to act with individuals in both the Dental School and the School of Biomedical Sciences will be important and credentials indicating eligibility for cross-appointment in a basic science department are required. Candidates should have a Ph.D. or D.D.S./Ph.D. and a strong background in research coupled with a keen interest in graduate education. This position offers the opportunity to join a rapidly expanding research group at the dental school which is aggressively developing its potential as a national center for basic and applied research. Curriculum vitae, brief statement of present and future research interests and three letters of recommendation should be sent to: **Dr. Frank A. Catalanotto, D.M.D., Chairman, Department of Pediatric Dentistry, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284-7888.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### MOLECULAR BIOLOGIST—HARVARD

**POSTDOCTORAL POSITION** available in a multidisciplinary, basic research environment at the **Massachusetts General Hospital in the Department of Medicine, Harvard Medical School** to investigate mechanisms of growth regulation in cultured renal mesangial cells. Applicant should have a Ph.D. and experience with recombinant DNA and techniques of nucleic acid analysis. Submit curriculum vitae and names of references to: **Joseph V. Bonventre, M.D., Ph.D., Renal Unit, Massachusetts General Hospital, Fruit Street, Boston, MA 02114.**

### MOLECULAR NEUROBIOLOGIST

The recently created **Division of Neuroscience at the Oregon Regional Primate Research Center** has a position (assistant or associate rank) for a highly motivated scientist with research interests in the molecular biology of neural growth factors. The appointee is expected to develop a vigorous research program employing recombinant DNA technology (cDNA cloning, DNA and RNA blotting, genomic DNA cloning, expression analysis, and in vitro mutagenesis) and to interact with a group of investigators studying the development of hypothalamic function by physiological, cellular, and biochemical methods. Substantial laboratory space, equipment, and start-up funds are available. The appointee should be willing to include primates in his/her research. Excellent opportunities exist for interaction with the new Vollum Institute for Advanced Biomedical Research and basic science departments at the Oregon Health Sciences University. Qualified individuals should send their curriculum vitae, a statement of research goals and the names of three references to: **Head, Division of Neuroscience, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006.** *The Center is an Equal Opportunity/Affirmative Action Employer.*

### NEUROSCIENCE FACULTY POSITIONS AT

#### HAHNEMANN UNIVERSITY PHILADELPHIA, PENNSYLVANIA

Mid- to senior-level academic positions are available in the Center for Neurological Research at Hahnemann University.

These positions are being offered as part of the continuing commitment of the University to a multidisciplinary program in the neurosciences. Required are an M.D. and/or Ph.D. degree and an established record of research in the neurosciences, as evidenced by extensive publications and extramural research support.

Successful candidates will be expected to interact on a campus-wide level with clinical and basic investigators in the neurosciences. While the primary focus will be research, successful candidates will also be encouraged to engage in the education and training of graduate students, postdoctoral fellows, and medical students.

Applications must be submitted by 1 June 1987. Interested applicants should send curriculum vitae, bibliographies, and names of three references to: **Elliott L. Mancall, M.D., Chairman, Department of Neurology, HAHNEMANN UNIVERSITY, Mail Stop 423, Broad and Vine Streets, Philadelphia, PA 19102.**

*Equal Opportunity/Affirmative Action Employer.*

### Ph.D. CLINICAL CHEMIST

A tenure-track Ph.D. faculty position is available for the **Division of Clinical Chemistry, Department of Pathology, University of Florida, College of Medicine in Gainesville, Florida.** Assistant professor or associate professor rank will be awarded dependent upon qualifications. Responsibility for an analytical toxicology—drug monitoring program would be a central function. Experience with mass spectrometry/high pressure liquid chromatography essential. The successful applicant would provide a resource for assay development, and contribute to the teaching of medical students, residents, and medical technologists. An independent research program would be expected. Applicants should submit their curriculum vitae and list of references to: **William Riley, M.D., Department of Pathology, Box J-275, J. Hillis Miller Health Center, Gainesville, FL 32610.** Applications close 1 July 1987 with starting date before 1 October 1987. Salary commensurate with experience and training.

*An Equal Opportunity/Affirmative Action Employer.*

## IMMUNOLOGY LABORATORY

# RESEARCH SCIENTIST

Collagen Corporation, headquartered in Palo Alto, California, is engaged in the research, development, production and marketing of differentiated biomedical products. Our state-of-the-art environment combined with the clinical relevance of our core technology presents a challenging opportunity for a Research Scientist with immunological experience to step into the future of biotechnology.

Collaborating with other scientists, you will be part of a research team investigating the therapeutic uses of growth factors, lymphokines and

cytokines. You should have a Ph.D. and 2-3 years of post-doctoral experience in cellular immunology, in addition to experience with immunochemical techniques.

Collagen Corporation strongly encourages and rewards professional contribution. To learn more about this position and our attractive compensation package, please send your C.V., bibliography, and the names of several references to: **M. Ruselink, Human Resources, Collagen Corporation, 2500 Faber Place, Palo Alto, Ca 94303.** We are an equal opportunity employer.



**COLLAGEN**  
CORPORATION

# Protein Chemist

**Triton Biosciences Inc.**, an entrepreneurial subsidiary of Shell Oil Company, is an emerging force in the development of diagnostics and therapeutics for human health care. Our company is built upon a strong base of research expertise, solid support, and responsive management.

Excellent opportunities exist for two innovative researchers in our Protein Chemistry Department. Qualified candidates should have a PhD in Chemistry/Biochemistry or a related field and at least 3-5 years of combined post-doctoral studies and/or industrial experience.

**Receptor Biochemistry**—The successful candidate will develop and execute therapeutic and diagnostic projects which target cytokine and oncogene receptors. A strong background in membrane protein biochemistry is essential.

**Cytokines**—The successful candidate will investigate the utility of cytokines as potential cancer therapeutic agents. A strong background in protein purification and characterization is essential.

Triton is located in the San Francisco Bay Area and offers competitive salaries and benefits, including relocation assistance. For prompt consideration, please forward your C.V. along with salary requirements and the names of three references to: **Triton Biosciences Inc., Box JJ, 1501 Harbor Bay Parkway, Alameda, CA 94501.** All candidates must have U.S. citizenship or permanent resident visa status. Triton is an equal opportunity employer.



**Triton Biosciences Inc.**

## POSITIONS OPEN

### NUCLEAR PHYSICIST/CHEMIST

The Wadsworth Center for Laboratories and Research is seeking two highly qualified scientists to (i) supervise the radiochemistry and radioactivity measurements groups within a lab engaged in the routine monitoring of environmental radioactivity and (ii) develop his/her own research program, preferably in an area related to environmental radioactivity. The position could include a joint appointment with the Graduate School of Public Health Sciences, State University of New York which is located at the Wadsworth Center. The laboratory is fully equipped with state-of-the-art instrumentation and is staffed with personnel active in research on long-range transport of pollutants, acid rain, stratospheric-tropospheric exchange, radioactive and nonradioactive tracers, cosmogenic isotopes, radiatively important trace gases, and indoor radon. A Ph.D. degree with 0 to 5 years experience is desirable. Salary commensurate with qualifications. Excellent fringe benefits. Send résumé to: **Dr. L. Husain, Wadsworth Center for Laboratories and Research, New York State Department of Health, Albany, NY 12201.** An Equal Opportunity/Affirmative Action Employer.

### POSITION AVAILABLE— PEDIATRIC GENETICS

The Department of Pediatrics at Stanford University School of Medicine seeks applications from or nominations of candidates for appointment to the full-time faculty, at the assistant or associate professor level, to serve as Director of the Division of Genetics. This division is presently staffed by two faculty members and is dedicated to patient care, research and education in diseases of genetic origin.

Candidates for appointment as an assistant professor should have a background of research training in, and a strong commitment to human genetics, with emphasis on research in the molecular genetics of disease. Candidates for appointment as an associate professor must have an established research program in this area. Additional responsibilities include patient care, medical student teaching, and education of residents and fellows. Candidates should be certified or eligible for certification in pediatrics and in clinical genetics.

Interested candidates should send their curriculum vitae and names of references to: **Irving Schulman, M.D., Chairman, Department of Pediatrics, Stanford University Medical Center, Stanford, CA 94305.**

*Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.*

**Ph.D. MOLECULAR BIOLOGIST** with extensive experience in nucleic acid electrophoresis and DNA sequencing to work full-time in the research and development department in San Francisco. Duties include the testing of existing and prototype instruments used in the separation sciences, as well as coordination of projects with the Applications Department. Applicants must be interested in instrumentation and be technically competent in the use of equipment. Employee benefits include health and life insurance, bonuses, profit sharing, cost of living increases, and pleasant working environment. Send résumé to: **Dr. David Hawley, Hoefer Scientific Instruments, Box 77387, San Francisco, CA 94107.**

### Ph.D. IN MOLECULAR BIOLOGY

Ph.D. in Molecular Biology desired for position in an Oncology Hospital-based research laboratory, to initiate research program involving: growth factors, oncogenes, and gene rearrangements in both solid and hematologic malignancies.

Individual with several years of postdoctoral experience as well as record of independent, original research preferred. Send curriculum vitae and reference letters to:

**Larry Nathanson, M.D.  
Winthrop-University Hospital  
222 Station Plaza North  
Room 300  
Mineola, NY 11501**

## PROTEIN & COMPUTATIONAL CHEMISTRY

SRI INTERNATIONAL, a non-profit research institute, has openings for PhD Staff Scientists with experience in the application of computational chemistry or biophysical methods to protein/peptide structure-function analysis.

**Computational Chemists.** Current projects include mechanistic structure activity studies of opiate narcotics and anxiolytics. Interested candidates should have experience using a variety of theoretical chemical methods including ab initio and semi-empirical quantum mechanical and empirical energy methods as well as experience in evaluating experimental literature.

**Protein Biophysical Chemist.** Current projects include protein engineering studies of mammalian growth factors, heparin binding proteins and thrombin protein-inhibitors. Experience in the application of 2D-NMR and other spectroscopic methods to protein structure determination and knowledge of experimental literature in the fields of protein biochemistry and recombinant DNA technology is highly desirable.

Candidates for both positions will work in close collaboration with experimental lists in the fields of pharmacology, synthetic medicinal and peptide chemistry and molecular genetics.

SRI INTERNATIONAL offers a competitive salary and benefits package and a stimulating work environment. Submit curriculum vitae, statement of research goals and accomplishments and the names of 3 references to: **Dr. Gilda Loew, Director of Molecular Theory or Dr. Paul Johnson, Director of Molecular Biology, Bldg. 205, SRI INTERNATIONAL, 333 Ravenswood Avenue, Menlo Park, CA 94025.** An equal opportunity employer.



## BS/MS PHARMACOLOGISTS

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for a position in the cardiovascular pharmacology research department.

Applicants must have a B.S. or M.S. degree in pharmacology or physiology; practical laboratory experience is desired.

Responsibilities for this position will include conducting experiments designed to understand smooth and cardiac muscle function, characterize receptor mechanisms and develop new therapeutic agents. The associate will be expected to contribute to the design of experiments, and the analysis and interpretation of data. Laboratory experience with *in vitro* smooth muscle techniques and/or *in vivo* cardiovascular hemodynamics is preferred. Working knowledge of computers with some programming experience is desirable.

Qualified applicants should send their resume to:



**Terri L. Cramer (ACP)  
Scientific Recruitment Representative  
Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46268**

Equal Opportunity Employer

## ASSOCIATE DEAN FOR RESEARCH AND GRADUATE STUDIES

School of Medicine

STATE UNIVERSITY OF  
NEW YORK AT BUFFALO

The School of Medicine, State University of New York at Buffalo invites nominations and applications for the position of Associate Dean for Research and Graduate Studies. This position is to coordinate graduate programs and facilitate the research mission within the School of Medicine. Doctoral and Masters programs exist in eight basic medical science departments and there is a Medical Scientist Training Program which is in its third year.

We seek an individual with a Ph.D. or M.D. degree and experience in both graduate education and research administration. For a suitably qualified person there is the potential for an appointment to a faculty position.

Review of applications for this position is starting immediately. Please send nominations or letters of application, resumes and three letters of reference to: Alexander C. Brownie, Ph.D., D.Sc., Chair, Associate Dean Search, Department of Biochemistry, 102 Cary Hall, State University of New York at Buffalo, Buffalo, NY 14214 by May 15, 1987.

*The State University of New York at Buffalo is an Equal Opportunity, Affirmative Action Employer. We encourage applications from women and minorities.*

## Postdoctoral Scientist Biological NMR

Postdoctoral research positions are available in the biological nuclear magnetic resonance program at SK&F for research projects in solution NMR studies of peptides, proteins and ligand-macromolecule interactions.

The SK&F biological NMR group has a significant publication record and is well equipped for experimental NMR and off-line data processing.

Candidates for a Postdoctoral Research position should have some experience in the application of NMR to chemical or biological systems.

Postdoctoral appointments are normally of 2 years duration.

SK&F Laboratories is located near Valley Forge, PA in a new, state-of-the-art research complex. We offer an excellent compensation, benefits, and relocation package. Reply in confidence to George P. Kissell, Jr., Manager, Personnel Relations, SK&F Laboratories, 1588 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for positions in the Department of Biochemical Toxicology.

## BS/MS SCIENTIST LIPID METABOLISM

Applicants must have either a Bachelors or Masters degree in Biochemistry or a related discipline. A strong background in lipid and lipoprotein analysis and knowledge of lipid metabolism are essential.

The successful candidate will participate in research directed at defining mechanisms of drug-induced alterations in hepatic lipid metabolism as well as other aspects of hepatic toxicology.

## BS/MS SCIENTIST PHARMACOKINETICS

Applicants must have either a Bachelors or Masters degree in Pharmacology, Toxicology, or a related discipline.

Primary responsibilities involve the conduct of pharmacokinetic studies to support preclinical toxicology studies. This includes responsibility for both the measurement of drug content in tissue and body fluids using chromatographic techniques and the pharmacokinetic analysis of blood level data. In addition, the successful candidate will participate in the development of new methods for the evaluation of drug pharmacokinetics.

Qualified candidates should send their curriculum vitae to:



**Ms. Carol Zapapas**  
**Personnel Representative—GA991**  
**Eli Lilly and Company**  
**Greenfield Laboratories**  
**P.O. Box 708**  
**Greenfield, Indiana 46140**

Equal Opportunity Employer

## CSIRO AUSTRALIA

### SIR FREDERICK McMASTER BEQUEST SENIOR FELLOWSHIPS IN VETERINARY SCIENCE AND AGRICULTURE

The late Sir Frederick McMaster, a prominent Australian grazier, made a bequest to CSIRO to further research in veterinary science and agriculture. CSIRO has accordingly created a number of Fellowships to support research in the fields of veterinary science, agriculture and related fields of biology of relevance to the Organisation's work.

The then Executive of CSIRO determined that the Fellowships should be awarded to "very senior and distinguished scientists located outside Australia"

The Fellowships are tenable in Australia in the following CSIRO Divisions/Units: Animal Health, Animal Production, the Australian Animal Health Laboratory, the Centre for Irrigation and Freshwater Research, Entomology, Environmental Mechanics, Food Research, Horticultural Research, Human Nutrition, Molecular Biology, Plant Industry, Soils, Tropical Animal Science, Tropical Crops and Pastures, Water and Land Resources, the Wheat Research Unit and Wildlife and Rangelands Research. These Divisions/Units have laboratories located throughout Australia and employ some 2800 staff of whom about 1000 are professional scientists. All Division/Units are well equipped to undertake research in their particular areas of interest.

It is expected that Fellowships will range in duration from 3 to 12 months. The length will be the subject of negotiation and will be largely dependent on the nature of the proposal.

The support available to cover airfares, living allowance and honorarium will depend on individual circumstances and is expected to average \$A20,000-\$A25,000 per Fellow. Successful applicants will be encouraged to obtain supplementary support from other sources.

Applications for Sir Fredrick McMaster Fellowships or expressions of interest are invited from very senior overseas scientists. These should include relevant personal particulars, qualifications and experience, a research/activities proposal, the names of any CSIRO collaborators and a preferred Division or location, the proposed duration of the Fellowship and an estimate of the financial and other support that would be required.

Applications or expressions of interest should be directed to:

**The Secretary**  
**Sir Frederick McMaster Fellowship**  
**Selection Committee**  
**CSIRO**  
**PO Box 225**  
**DICKSON ACT 2602**  
**AUSTRALIA**

by June 30, 1987.

A brochure setting out the conditions applying to the Fellowships is available on application to the Secretary, Sir Frederick McMaster Fellowship Selection Committee.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

# Microbiologist

**An MS level position** for a Contract Microbiologist is available within Du Pont's esteemed Central Research and Development Department. As a member of a newly-formed research group, you will primarily be involved in the study of protein secretion in prokaryotes. To qualify for this temporary 1-2 year opportunity, you should have a MS in microbiology, biochemistry or molecular biology, be able to isolate, grow and maintain microbial cultures, and be expert in recombinant DNA methodologies. Preference will be given to candidates with significant laboratory experience in molecular genetic or nucleic acid and protein biochemistry.

**You'll find a highly stimulating** scientific environment in a modern research facility located near Wilmington, DE. Our Mid-Atlantic location offers a wide range of academic, cultural and recreational activities. We provide competitive compensation and relocation benefits. Interested candidates should send their resumes with salary requirements and the names of three references to: Dr. Stephen T. Toy, Employee Relations Department, Room X50772, Du Pont Company, Wilmington, DE 19898.



U.S. Citizenship or Permanent VISA Required.  
An Equal Opportunity Employer M/F/H/V

STATE UNIVERSITY OF NEW YORK AT

## Stony Brook

BIOCHEMISTRY, CELL AND MOLECULAR BIOLOGY OF METABOLIC DISEASES

POSTDOCTORAL FELLOWSHIPS FOR Ph.D.s & M.D.s

Postdoctoral positions are available within a multidisciplinary, interdepartmental program of The Diabetes & Metabolic Diseases Research Group at Stony Brook, supported by an NIH Institutional Training grant. Research interests of some of the 20 faculty trainers are:

Paul Adams (Neurobiology) - *Excitability of nerve cells.*

William Benjamin (Physiology & Biophysics) - *Mechanisms of insulin action.*

Michael Berelowitz (Endocrinology) - *Hypothalamic peptide regulation of growth hormone.*

Harvey Brandwein (Pharmacology) - *Cyclic nucleotides and intestinal ion flux.*

Joel Brown (Washington Univ. affiliate) - *Transduction in photoreceptors.*

Joan Brugge (Microbiology) - *C-src proto-oncogene and cell regulation.*

Vincent Cirillo (Biochem.) - *Purification/reconstitution of sugar transporters.*

Ira Cohen (Physiology & Biophysics) - *Patch-clamping in cardiac cells.*

Paul Fisher (Pharmacology) - *Karyoskeletal structure and function.*

Craig Malbon (Pharmacology) - *Structure & biology of receptors and G-proteins.*

Robert Olson (Medicine, Pharmacology) - *Mode of action of isoprenoid lipids.*

Simon Pilakis (Physiology & Biophysics) - *Molecular mechanisms of hormone action.*

Edward Reich (Pharmacology) - *Autocrine regulation: parasite biochemistry.*

Leon Sokoloff (Pathology) - *Skeletal and articular aging.*

Sidney Strickland (Pharmacology) - *Biochemistry of mammalian differentiation.*

Linda Tseng (Medicine-OB/GYN) - *Reproductive molecular endocrinology.*

William Van der Kloot (Physiology) - *Regulation of neurotransmitter packaging.*

David Williams (Pharmacology) - *Regulation of lipoprotein gene expression.*

Eckard Wimmer (Microbiology) - *Analysis of polyprotein processing: poliovirus receptor.*

Send letters of reference, C.V., a description of research interests, training faculty of interest, to:

Dr. C. C. Malbon, Program Director  
Diabetes & Metabolic Diseases Research Training Program  
Health Sciences Center - State University of New York  
Stony Brook, Long Island, New York 11794-8651

SANDOZ, a leading international pharmaceutical company based in Switzerland, is expanding its Preclinical Research Department in Basle. As an integral part of this planned growth, we require a well-qualified

## Pharmacologist or Physician as Project Leader

to be head of a group working on the development of new drugs for the treatment of

### Disorders of Bone Metabolism

a field in which SANDOZ has considerable clinical experience, to which we now plan to devote more research resources.

The successful candidate will help to establish this new interdisciplinary group within endocrinological research. He or she should be familiar with, and capable of designing and setting up, both biochemical and animal models of disorders of bone metabolism and will be able to participate in the selection of additional appropriately qualified staff.

In addition to qualifications in experimental pharmacology or physiology (Ph.D. or M.D.), applicants should thus have postdoctoral experience, specialised knowledge of bone metabolism, a background knowledge of endocrinology, and proven ability to lead a small group of research scientists.

SANDOZ offers a scientifically attractive working atmosphere, well-equipped laboratories, and the opportunity both to publish the results of original research and to attend scientific meetings. Remuneration will be commensurate with the importance of this post and assistance with relocation will be given where necessary.

Applications, which will be treated in strict confidence, should be accompanied by a *curriculum vitae* and list of publications and addressed to:

Sandoz Ltd.  
Personnel Department, Ref. 7110  
CH-4002 Basle, Switzerland





## Postdoctoral Scientist Enzymology

The Department of Medicinal Chemistry at SK&F has an immediate opening for a Postdoctoral Scientist to work in an environment designed to foster innovative research and promote personal and professional growth. Publication of research in leading journals and interaction with the scientific community are strongly encouraged. Postdoctoral appointments are normally of two years duration.

The successful candidate will be involved in the isolation of previously uncharacterized viral enzymes obtained as cloned products from bacterial and yeast expression systems, structural characterization of the purified enzymes, and will contribute to kinetic analysis to determine the chemical mechanisms of the enzyme-catalyzed reactions. The candidate will also interact with synthetic chemists to assist in the design of enzyme inhibitors of therapeutic potential, and characterize enzyme-inhibitor interactions.

The successful candidate will have:

- Ph.D. in Bio-Organic Chemistry, Biochemistry or equivalent.
- Experience in enzyme isolation, structural characterization, and the development of specific enzyme assays.
- Experience in kinetic analysis of enzymatic reactions using steady-state methods, and a working knowledge of biological reaction mechanisms. Familiarity with molecular biological methods is desirable.

We are located near Valley Forge, PA, in a new state-of-the-art research complex and offer an excellent salary, benefits, and relocation package. Please forward your c.v. to George P. Kissell, Jr., Manager, Personnel Relations, Smith Kline & French Laboratories, 1598 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## Senior Positions **SYRACUSE UNIVERSITY** **DEPARTMENT OF BIOLOGY**

Syracuse University is embarking on a major program of growth and development within the Department of Biology, including new research facilities, increased commitment to the graduate program, and the addition of several faculty during each of the next five years. The Department now invites nominations and applications for three senior positions (Full Professors) to enhance the growth of strong Molecular Biology and Population Biology units.

Syracuse University is a private university with an enrollment in excess of 16,000 students. The Biology faculty of 26 conduct research and supervise Ph.D. candidates in diverse areas including Biochemistry, Population Biology, Genetics, and Cell and Molecular Biology. Interactions with faculty on the adjacent campuses of the State University of New York Health Sciences Center and the College of Environmental Science and Forestry contribute additional strength in these areas.

Candidates must have a vigorous research program supported by extramural funding, and a record of significant accomplishments. Appointees will have the majority of their time available for research; however, participation in undergraduate and graduate teaching is also required. Excellent facilities, support, and compensation will be available.

Applications, including a curriculum vitae and a statement of research goals, or nominations should be sent as indicated below:

### **MOLECULAR BIOLOGY**

Molecular approaches to a wide variety of problems are currently used by ten faculty members. Expansion of this group will initially include the addition of two experts in any area of molecular biology who will then help guide its further growth and development.

**Molecular Biology Search**  
**Biology Department**  
**Syracuse University**  
**130 College Place**  
**Syracuse, NY 13244-1220**



### **POPULATION BIOLOGY**

The population biology group, presently including five senior faculty, will add a distinguished colleague in any area of ecology and evolutionary biology. The university expects to invest considerable resources in the growth and development of the population biology group.

**Population Biology Search**  
**Biology Department**  
**Syracuse University**  
**108 College Place**  
**Syracuse, NY 13244-1270**

An Equal Opportunity/Affirmative Action Employer

## **SENIOR CARDIOVASCULAR PHARMACOLOGISTS**

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is expanding its cardiovascular research program resulting in the following career opportunities for Senior Research Pharmacologists:

### **Endothelial Cell/Platelet Function**

The Senior Investigator will study biochemical, pharmacological and physiological interactions between vascular endothelial cells and platelets. Expertise in cell culture techniques, platelet aggregation and mediator release and/or endothelial cell function is desirable. Responsibilities will include design of an innovative independent basic research program that will complement an active cardiovascular drug discovery effort. Applicants must have a doctoral degree in either biochemistry, pharmacology and/or physiology with relevant postdoctoral experience.

### **Myocardial Ischemia**

An opportunity exists for a cardiovascular pharmacologist/physiologist with experience in *in vivo* animal models. Expertise in hemodynamics and myocardial ischemia and a general knowledge of the role of formed blood elements in the ischemic process are desirable. The Senior Scientist will establish creative basic research and drug discovery programs as well as collaborate with an active drug development team. Applicants must hold a doctoral degree and possess relevant post-doctoral experience.

Qualified candidates should send their curriculum vitae to:



John W. Crooks  
Manager, College Relations (SCP)  
Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46285

Equal Opportunity Employer

## POSITIONS OPEN

**Biotech Research Labs** has three immediate openings for **Ph.D. SCIENTISTS: MICROBIOLOGIST/BIO-CHEMIST**—experienced in recombinant DNA and expression of proteins in mammalian vectors; **IMMUNOLOGIST/VIROLOGIST** (postdoctoral position)—experienced in retrovirus or other virus research; **PROTEIN CHEMIST**.

Send curriculum vitae and names of three references to: **Terri Mayberry, Biotech Research Labs, 1600 East Gude Drive, Rockville, MD 20850.**

**PHARMACOKINETICIST** to design protocols for clinical trials of drug products and evaluate the clinical trial pharmacokinetic and pharmacodynamic results. Will prepare reports on results for FDA submission. Ph.D. with major in pharmacokinetics. No experience required, but ability to design, modify, and use pharmacokinetic, pharmacodynamic, and analytical research methods (including modeling) and knowledge of FORTRAN, BASIC, NONLIN and statistical analysis required. Salary for 5-day approximately 40-hour week, \$40,000 per year. Send résumé and copy of ad to:

Department of Employment and Training  
1123 North Eutaw Street, Room 200  
Baltimore, MD 21201  
Job Order Number 6032921  
Job Location—Rockville, MD

## PHARMACOLOGIST

**Northeastern University, College of Pharmacy and Allied Health Professions**, is seeking applicants for a full-time tenure-track position at the level of assistant or associate professor of pharmacology. Candidates will be expected to bring or establish an independent extramurally funded research program in their area of interest as well as teach pharmacology to graduate and undergraduate pharmacy students. Desirable areas of expertise include but are not restricted to: molecular, cardiovascular, biochemical, and neuropharmacology. Teaching experience is preferred. Qualifications required are Ph.D. in pharmacology with 2 years of postdoctoral experience. Applicants should send curriculum vitae, including relevant reprints and names of three references, to the following address by 15 May 1987. **Dr. Robert A. Schatz, Search Committee Chairman, Section of Pharmacology, Mugar Hall, Northeastern University, 360 Huntington Avenue, Boston, MA 02115.** *Northeastern is an Equal Opportunity/Affirmative Action Title IX Employer.*

## UNIVERSITY OF PENNSYLVANIA

**Pennsylvania—PHARMACOLOGY.** Full-time junior tenure-track faculty position available in the Division of Pharmacology, School of Dental Medicine. Research interests in area of pain and inflammation preferred. Some teaching experience is a necessity. Teaching responsibilities include both undergraduate and postgraduate dental. Salary and rank commensurate with qualifications and experience. *Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to: **Dr. Benjamin Hammond, University of Pennsylvania, School of Dental Medicine, 4001 Spruce Street, Philadelphia, PA 19104.**

## PHARMACOLOGY

**The School of Pharmacy, Campbell University**, invites applications for a 12-month, **TENURE-TRACK FACULTY POSITION** in the Department of Pharmaceutical Sciences. Rank and salary are negotiable and commensurate with the applicant's qualifications and experience. Candidates for the position should hold a Ph.D. degree and have broad training in pharmacology. Responsibilities include the development and maintenance of an active research program and instruction in the Pharm. D. curriculum. Excellence in teaching is expected. Interested applicants should send their curriculum vitae, summaries of their research interests and objectives, and three letters of reference to: **Dr. Harry Rosenberg, Chairman, Department of Pharmaceutical Sciences, School of Pharmacy, Campbell University, Buies Creek, NC 27506.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**PHYSICISTS—TWO POSITIONS:** The **National Bureau of Standards (NBS), Institute for Materials Science and Engineering, Reactor Radiation Division**, is recruiting for GS-14 (\$45,763) physicists to work in cold neutron research. A Ph.D. or equivalent experience is required for both positions. One position requires experience in condensed matter physics and chemical physics research using advanced neutron scattering methods particularly in the areas of molecular and disordered inorganic materials; in the development of modern cold and thermal neutron scattering instruments, particularly crystal spectrometers; and in design and use of back reflection devices. The second position requires experience in the design and development of modern cold neutron scattering instruments, particularly time-of-flight and small angle scattering spectrometers; with neutron choppers, monochromators, and neutron area and multidetector systems and high level computer programming for neutron data analysis and Monte Carlo simulations; and in condensed matter physics research using advanced neutron scattering methods.

Send Personal Qualifications Statement (SF-171) or résumé to: **Rosemary Hormuth, Room A-123, Administration Building, National Bureau of Standards, U.S. Department of Commerce, Gaithersburg, MD 20899.** *U.S. citizenship is required. NBS is an Equal Employment/Affirmative Action Employer.*

**PHYSIOLOGIST, Department of Pharmacodynamics, College of Pharmacy, University of Florida:** Applicants are invited for the position of teaching assistant—in pharmacodynamics. Duties include teaching sections of courses in human physiology and pathophysiology. The position is currently funded for 1 year and additional years of service will depend upon the availability of funds. The expected salary range is \$22,000 to \$24,000 plus fringes. The department has five faculty doing research in neuroendocrine and cardiovascular physiology and pharmacology. Applicants should submit their curriculum vitae, a statement of teaching and research interest, and three letters of reference by 1 May 1987 to: **Dr. James W. Simpkins, Chairman, Department of Pharmacodynamics, Box J-487, JHMHC, University of Florida, Gainesville, FL 32610.** *The University of Florida is an Equal Opportunity Employer.*

## PHYSIOLOGY RESEARCH ASSISTANT

Applications are invited for a research assistant position in the area of membrane transport. Candidates should have a Ph.D. in physiology, biochemistry, or a related subject and training in recombinant DNA technology, protein chemistry, and the biology of membrane transport proteins. Research involves studies on the sugars, amino acids, and carboxylic acids. Send applications to: **Dr. Ernest M. Wright, Physiology Department, UCLA Medical Center, Los Angeles, CA 90024.** *The University is an Equal Opportunity/Affirmative Action Employer.*

## PLANT CELLULAR/ MOLECULAR BIOLOGY

**The Department of Molecular Biology, University of Wyoming**, has an opening for a tenure-track faculty position. Individuals with research expertise in the area of plant cellular/molecular biology are encouraged to apply. The successful candidate will be expected to establish a vigorous, nationally competitive research program and participate in teaching. A Ph.D. is required and at least 2 years of postdoctoral experience are highly desirable. This position is part of a special program, EPSCoR, supported by the University and NSF. The Department has 19 faculty members with diverse, active research programs. All laboratories and classrooms are modern and equipped with state-of-the-art instrumentation. The Department has a Biotech facility with automated sequencing and synthesis of proteins and DNA. The College has excellent facilities for greenhouse and field test work as well as P-3 isolation capacity. The University is situated in the high plains of southeastern Wyoming. Fishing, hunting, skiing, backpacking, and mountain climbing are available within a 30-minute drive. Applicants should send curriculum vitae, three letters of reference, and a statement of research plans and interests by 15 May 1987 to: **Chairman, Faculty Search Committee, Department of Molecular Biology, P.O. Box 3944, Laramie, WY 82071.** For further information regarding the position, contact: **Dr. Randolph V. Lewis** at 307-766-3300. *The University of Wyoming is an Equal Opportunity/Affirmative Action Institution.*

## POSITIONS OPEN

### POSTDOCTORAL ASSOCIATE RESEARCH IN GASTRIC CARCINOGENESIS

**The Division of Comparative Medicine at the Massachusetts Institute of Technology** has an immediate opening for two postdoctoral associate positions to conduct research on intragastric nitrosation and predictive modeling of gastric carcinogenesis in laboratory animals. Responsibilities include assisting in surgery and preparation and analysis of biological specimens for biochemical analysis. The qualified applicant should have experience with laboratory animal surgery and manipulation, training in physiology, and knowledge of techniques for biochemical evaluation. Candidates with interests in pursuing careers in laboratory animal medicine or comparative pathology are encouraged to apply. A D.V.M. degree or equivalent is required. Applications and the names of three references should be addressed to: **Dr. James G. Fox, Professor and Director, Division of Comparative Medicine, Massachusetts Institute of Technology, 37 Vassar Street, 45-105, Cambridge, MA 02139.**

### POSTDOCTORAL ASSOCIATE

Neurophysiologist to study membrane properties and interactions of synaptically coupled pairs of cultured adult mammalian neurons. Novel application of primary cultures of retinal ganglion cells, thalamic and cortical neurons. Experience in basic electrophysiology and patch clamping desirable. Newly equipped dedicated state-of-the-art laboratory set-up available. Position funded at \$17,000 to \$20,000 for up to 3 years. Available 1 September 1987. Send curriculum vitae, research interests, and names of three references to: **Michael Friedlander, Ph.D., Neurobiology Research Center, Volker Hall, University of Alabama at Birmingham Medical Center, Birmingham, AL 35294.**

**POSTDOCTORAL FELLOW** to conduct research in mechanistic enzymology and molecular neurochemistry. Carry out enzyme, protein, and subcellular organelle isolation and purification. Carry out organic syntheses of novel neurochemical effectors, their metabolites, and corresponding radiochemical syntheses. Develop mechanistic hypotheses and provide tests for proving those hypotheses. Must be competent in the use of enzyme kinetic analysis, electrochemistry, standard spectroscopic techniques, as well as GC, HPLC-EC, FPLC techniques and the use of ultracentrifuges for neurochemical subcellular fractionation. Requires Ph.D. in chemistry and proven record of performance of the above job by way of publications and a basic knowledge and ability to handle radioactive material. Salary: \$18,000 per year. Apply in person with résumé to: **Georgia Department of Labor, 2811 Lakewood Avenue, SW, Atlanta, GA 30315, or to the nearest Georgia Job Service Center. Control #GA 5208791.**

### POSTDOCTORAL FELLOW ASSISTANT INVESTIGATOR

Available 1 July 1987 for Ph.D. with expertise and interest in enzyme isolation and characterization to join group study in removal of blood group antigens from the red cell surface. Send curriculum vitae and names of three references to: **Dr. J. Goldstein, Cell Biochemistry Laboratory, Lindsley F. Kimball Research Institute, New York Blood Center, 310 East 67 Street, New York, NY 10021.** *Equal Opportunity Employer.*

**The Biomolecular Structure Analysis Center** is seeking a **POSTDOCTORAL FELLOW** with a strong background in physical chemistry and experience in membrane structure/function. This collaborative project, investigating molecular interactions of drugs and small molecules with biomembranes, involves x-ray/neutron diffraction, NMR, and molecular modeling. The objective is to determine drug structures in membranes, receptor mechanisms of drug binding to membrane receptors, and essential molecular criteria for rational drug design. The Center contains state-of-the-art x-ray instrumentation (small angle and crystallography) and molecular modeling facilities with off-site access to NMR and neutron diffraction. **L. G. Herbet, Biomolecular Structure Analysis Center, University of Connecticut Health Center, Farmington, CT 06032.** *Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**POSTDOCTORAL FELLOW.** For work on chemical and biochemical aspects of novel platinum antitumor agents. 1 August 1987. Yearly renewable. Salary commensurate with experience. Contact: **Dr. M. P. Hacker**, Department of Pharmacology, or **Dr. N. Farrell**, Department of Chemistry, University of Vermont, Burlington, VT 05405.

**The Alcohol Research Center with the Biomolecular Structure Analysis Center**, are seeking a **POSTDOCTORAL FELLOW** with a strong background in physical chemistry and 0 to 2 years experience in the membrane structure/function area. An exciting collaborative project will investigate the detailed molecular interaction of alcohols, drugs and amphiphilic small molecules in membranes as well as their effects on membrane structure. The Alcohol Research Center contains laboratories engaged in animal models for acute and chronic ethanol ingestion, facilities to measure brain neurotransmitters and receptors, ion flux assays and other enzymic markers. The Structure Center contains state-of-the-art facilities in small angle x-ray scattering, x-ray crystallography and molecular modeling complemented by collaborative arrangements with off-site facilities for NMR and neutron diffraction. Stipends and length according to NRSA guidelines. **L. G. Herbert**, **Biomolecular Structure Analysis Center**, University of Connecticut Health Center, Farmington, CT 06032. *Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** available immediately to work in the areas of synthesis of antibody immunconjugates, protein folding and molecular modeling, and large-scale immunoadsorption. Experience in synthetic organic chemistry, protein chemistry, molecular dynamics desired. Send curriculum vitae and names of three references to: **Dr. M. L. Yarmush**, Massachusetts Institute of Technology, Department of Chemical Engineering, Biotechnology Process Engineering Center, Room 66-501, Cambridge, MA 02139.

### POSTDOCTORAL POSITIONS

Several postdoctoral positions are available for the (a) development of photodynamic herbicides, (b) study of chlorophyll biosynthesis, (c) study of the biosynthesis of chlorophyll-protein complexes. Address curriculum vitae and three letters of reference to: **Professor C. A. Rebeiz**, Laboratory of Plant Pigment Biochemistry and Photobiology, ABL, University of Illinois, 1302 West Pennsylvania, Urbana, IL 61801.

**POSTDOCTORAL POSITION** available late summer 1987 at Yale School of Medicine to investigate the action of differentiation- and oncogene-modulated cellular genes whose products are essential for productive parvovirus replication. This established, NIH-funded program has combined recombinant DNA techniques with viral and somatic cell genetics to analyze "non-enhancer-like" remote viral control elements responsive to host cell differentiated phenotype, as a molecular basis for parvoviral tissue tropism. Candidate should be recent Ph.D. Please send curriculum vitae and names of three references to: **Dr. Peter Tattersall**, Departments of Laboratory Medicine and Human Genetics, Yale School of Medicine, 333 Cedar Street, New Haven, CT 06510. Telephone: 203-785-4586.

**POSTDOCTORAL POSITION** available to investigate the molecular specificity of endothelial cell permeability. Projects involve morphological and biochemical approaches using both *in vivo* techniques and human endothelial cell cultures. Background in cell biology or biochemistry is preferred. Send curriculum vitae and names of references to: **Stuart K. Williams, Ph.D.**, Department of Surgery, Jefferson Medical College, Room 604-A, Philadelphia, PA 19107.

## ASSISTANT RESEARCH SCIENTIST

### DNA Sequencing

The Biotechnology Division of Miles Laboratories, Inc., a leading producer of industrial enzymes and acidulants, has an opening for an Assistant Research Scientist in its DNA Sequencing Laboratory.

The successful candidate will have a B.S. or M.S. in a relevant field and 0 to 2 years experience in DNA sequencing and related molecular biology techniques. Knowledge of Molecular Biology Software and a demonstrated ability to work on a wide variety of research projects would be a definite plus.

Located in Elkhart, Indiana we offer varied recreational and educational facilities as well as convenient accessibility to the Chicago area. Starting salary commensurate with experience, plus an excellent benefits program. Relocation expenses paid by the company.

If interested, please send complete resume in confidence to:

**Marguerite S. Gray**  
**Sr. Personnel Representative**  
**Department 230**  
**Miles Laboratories, Inc.**  
**P.O. Box 40**  
**Elkhart, IN 46515**

*An Equal Opportunity Employer M/F/H*



## Molecular Genetics/ Retroviral Research

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional senior scientific staff to expand its current research programs employing recombinant DNA technology and other genetic approaches to develop novel therapeutic agents.

Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

The Department of Molecular Genetics is seeking an outstanding Scientist with a Ph.D. in Microbiology, Biochemistry, Molecular Biology or equivalent and 2 to 3 years of postdoctoral experience in the area of retroviral research.

The candidate that we are seeking should have a strong research background in studying the biology and gene expression of retroviruses in mammalian cells using recombinant DNA techniques. This person will interact with a strong research group currently studying the *in vitro* activities of viral proteins expressed in several different recombinant host cell systems.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please send your C.V. and names of three references to: **Robert F. Obst**, R&D Senior Employment Consultant, SmithKline Beckman Corporation, 1568 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available to study structure-function relationships and metabolism of a membrane receptor. Strong background in cellular biochemistry and/or enzymology desirable. Contact:

Asok C. Antony, M.D.  
Department of Medicine  
Indiana University School of Medicine  
Room 379, Clinical Building  
541 Clinical Drive  
Indianapolis, IN 46223  
Telephone: 317-274-7269

*Indiana University is an Equal Opportunity, Affirmative Action Educator, Employer and Contractor, M/F.*

### POSTDOCTORAL POSITION MOLECULAR GENETICS WADSWORTH CENTER

Applications are invited for a federally funded postdoctoral position for studying the expression of intron-containing genes in *E. coli*. The work will include mutational and molecular analysis of self-splicing RNAs. Experience in prokaryotic molecular genetics and/or RNA processing is desirable. Send curriculum vitae and names of three references to: **Dr. Marlene Belfort, Wadsworth Center for Laboratories and Research, Empire State Plaza, Albany, NY 12201.** *An Equal Opportunity/Affirmative Action Employer.*

**University of Hawaii POSTDOCTORAL POSITION** to participate in patch-clamp analysis of peptidergic nerve terminals in situ and isolated from crab sinus gland. Two years, starting 1 June 1987, or after. Send résumé, and have two letters of reference sent to: **Ian Cooke, Békésy Laboratory of Neurobiology, 1993 East-West Road, Honolulu, HI 96822.** Telephone: 808-948-6776. *Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION AVAILABLE IMMEDIATELY**—A postdoctoral position is available immediately to study extracellular matrix synthesis and deposition by hepatocytes in culture under conditions of chronic injury. Background in molecular biology and tissue culture desirable. Stipend is competitive. Send curriculum vitae and names of references to: **Dr. Antonio Martinez-Hernandez, Professor of Pathology and Cell Biology, Thomas Jefferson University, Room 203-A, Main Building, 10th and Sansom Streets, Philadelphia, PA 19107.** *Equal Opportunity Employer.*

### POSTDOCTORAL POSITION IN MOLECULAR BIOLOGY OF ONCOGENES

M.D. and/or Ph.D. to study the effects of oncogenes and antisense oncogene transcripts on the differentiation capacity of hematopoietic cell lines. Strong background in molecular biology/recombinant DNA technology essential. Salary commensurate with NIH guidelines. Send curriculum vitae and names of three references to: **Edward V. Prochownik, M.D., Ph.D., Department of Pediatrics and The Committee on Cellular and Molecular Biology, F6515 Mott Hospital, The University of Michigan School of Medicine, Ann Arbor, MI 48109.** *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL POSITION BIOCHEMISTRY/NEUROCHEMISTRY/ NEUROBIOLOGY

Position available starting in summer/fall 1987 in the positron emission tomography program at University of California, Los Angeles (UCLA), School of Medicine. Research involves the study of regulatory mechanisms of dopamine neurotransmission. Applicants should have a strong background in biochemistry or neurochemistry. Send résumé and two letters of recommendation to: **Dr. J. R. Barrio, UCLA School of Medicine, Division of Nuclear Medicine and Biophysics, Los Angeles, CA 90024.** Current salary range is \$21,900 to \$27,400, depending on qualifications plus fringe benefits. *UCLA is an Equal Opportunity/Affirmative Action Employer.*

## Microbiologist/Biochemist Antimicrobials/ Food Preservation

The General Foods Central Research Department has an opening in its Tarrytown laboratories for a microbiologist/biochemist to join an expanding program studying the molecular mechanisms involved in antimicrobial systems of food products. A Ph.D. in Microbiology/Biochemistry, postdoctoral/industrial experience and knowledge of the mechanistic/molecular basis of microbiological preservation systems is required. Will be responsible for developing a basic research program to identify and develop novel microbial preservation systems for various food delivery systems.

General Foods offers a stimulating and rewarding research environment which sets a premium on excellent communication and interpersonal skills as well as a well developed ability to conduct independent research.

Salary is commensurate with experience and education. Outstanding benefits program.

Interested, qualified individuals should send a resume including professional accomplishments to:



Personnel Associate  
**GENERAL FOODS CORPORATION**

Technical Research Center  
555 South Broadway  
Tarrytown, NY 10591

*Equal Opportunity Employer M/F/H/V*

## ASSOCIATE SCIENTIST GENETIC TOXICOLOGY

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for an Associate Scientist position in the Department of Genetic and Developmental Toxicology.

Applicants must have either a Bachelors or Masters degree with a background in microbiology, cell biology or similar discipline. Prior laboratory experience and a knowledge of cell culture methodologies are desirable.

Primary responsibilities involve the conduct of *in vitro* tests in bacteria and cultured cells to assess the potential of chemicals to produce damage to DNA. Objectives of this research are the screening of new drug candidates for genotoxic potential; and the development of innovative methods to predict chemical carcinogenesis. The position represents a unique challenge to the qualified scientist interested in supporting research in the area of drug development.

Qualified candidates should send their curriculum vitae to:



**Ms. Carol Zapapas**  
**Personnel Representative—GA991**  
**Eli Lilly and Company**  
**Greenfield Laboratories**  
**P.O. Box 708**  
**Greenfield, Indiana 46140**

*Equal Opportunity Employer*

# Atherosclerosis Research

## Research Technician Associate Scientist

CIBA-GEIGY Corporation, a world leader in pharmaceuticals research, is looking for a research technician to join its Atherosclerosis Research Group.

You will support a research team doing computerized image analysis, cell culture and animal surgery. Requirements include a BS or MS in Biochemistry or Biology, laboratory training and computer literacy. Experience in animal surgery or cell culture would be helpful.

At CIBA-GEIGY's Pharmaceuticals Division, you'll find a research environment which encourages collaboration and innovation. We offer an excellent salary and benefits package. Our location is in a convenient suburban area within one hour of New York City. For prompt, confidential consideration please forward a resume with salary history and requirements, to: Mr. Stephen Mitchell, Manager, Technical Staffing, Dept. 462, The Pharmaceuticals Division of CIBA-GEIGY Corporation, 556 Morris Avenue, Summit, NJ 07901. An Equal Opportunity Employer m/f/h/v.

Science Serving Mankind

# CIBA-GEIGY

## Research Scientist Drug Metabolism Research

The Drug Metabolism Research Unit at Upjohn is seeking qualified scientists to conduct basic research on the absorption, distribution, metabolism, and excretion of novel pharmaceutical agents which are targeted for the treatment of human diseases. Successful candidates will be responsible for investigating the disposition and metabolism of radiolabeled drugs in both laboratory animals and in human volunteers. Required would be a Ph.D. in chemical, pharmaceutical, or biological sciences, including familiarity with analytical methodology. Experience at the post-doctoral level, training in pharmacology or pharmacokinetics, and a working knowledge of radiochemical techniques are highly desirable.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational and recreational pursuits, including numerous lakes and a four-season climate.

For confidential consideration, please call toll free 1-800-253-8600 ext. 3-6767, (inside Michigan call collect 616-323-6767) to request an employment application be sent to you. Please refer to Ad Number 21096-F when calling.

# Upjohn

**Our commitment to scientific excellence continues...**

An Equal Opportunity Employer M/F.

## WILDLIFE BIOLOGIST

Will help reduce data sets and prepare reports and articles concerning the ecology of San Joaquin kit foxes. Limited field work. Requirements include a BS emphasizing vertebrate ecology, or wildlife management. Preference given to senior authorship on major scientific reports dealing with subjects such as mammalian ecology, animal population dynamics, wildlife conservation or management. Positions will last until September 30th with the possibility of additional funding.

Duty station for positions is Bakersfield, California.

Qualified candidates send resume, publication list, and statement of availability to:



EG&G Energy Measurements, Inc.  
Santa Barbara Operations  
Attn: Technical Recruiting  
130 Robin Hill Road  
Goleta, California 93117

Refer to requisition #86-39

We require a pre-employment physical examination which includes drug and alcohol screening.

U. S. Citizenship Required  
An Equal Opportunity Employer

## DEPARTMENT HEAD MOLECULAR AND CELLULAR BIOLOGY UNIVERSITY OF ARIZONA

The University of Arizona is reopening its search for a department head of a new and growing Department of Molecular and Cellular Biology. A prominent scientist is sought to lead in the development of molecular, cellular, and developmental biology at Arizona. A significant number of tenure-track positions will be available to this department over the next few years and a new building, scheduled for completion in late 1989, will support this development.

The University of Arizona is currently strengthening a number of units as part of a University-wide commitment to excellence in Biological Sciences. Significant opportunities exist for the new Head to participate in this process.

Applications and nominations should be directed to Dr. Michael A. Wells, Chairman MCB Search Committee, c/o Marilyn Heins, M.D., Vice Dean, University of Arizona Health Sciences Center, College of Medicine, Tucson, Arizona 85724. The committee will begin considering applications on June 1, 1987, but will accept applications until the position is filled.



*The University of Arizona is an Equal Employment Opportunity/  
Affirmative Action Employer*



## POSITIONS OPEN

**POSTDOCTORAL POSITION.** Up to two positions in biophysical chemistry to work on dynamics and structures of linear and supercoiled DNAs, DNA/dye and DNA/protein complexes. Experience with pulsed laser fluorescence and absorbance techniques, dynamic light scattering, NMR spectroscopy of DNA, or recombinant DNA techniques is preferred. Please send résumé and three letters of recommendation to: **J. Michael Schurr, Department of Chemistry BG-10, University of Washington, Seattle, WA 98195.**

**POSTDOCTORAL POSITION** available immediately to investigate the microbial alkylation of lignin. Applicant should have a Ph.D. in microbiology and be willing to work with an interdisciplinary team on this 2-year project. Experience working with methylating organisms or biodegradation of lignin desirable. Submit résumé and list of three professional references to: **Dr. Carlton W. Dence, Paper Science and Engineering, State University of New York, College of Environmental Science and Forestry, Syracuse, NY 13210.**

**POSTDOCTORAL POSITION** available in cellular and/or molecular immunology. Applicants should have experience in cell culture and hybridoma technology or gene cloning. Salary negotiable. Send résumé and names of three references to: **Dr. Joel W. Goodman, Department of Microbiology and Immunology, S 412, University of California, San Francisco, CA 94143.**

**POSTDOCTORAL POSITION** for studies of immunoglobulin heavy chain switching. Ph.D.s with at least 3 years of postdoctoral experience are eligible. Candidates must be experienced in tissue culture, preparing and screening DNA libraries, DNA sequencing, RNA and DNA blotting, gel retardation assays, DNA footprinting, and protein purification. Send curriculum vitae and names of three references by 1 September 1987 to: **Dr. J. Stavnezer, Department of Molecular Genetics and Microbiology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01605.**

*An Affirmative Action/Equal Opportunity Employer.*

## POSTDOCTORAL POSITION

Applications are invited for a postdoctoral position to study voltage-sensitive ion channels on developing muscle. Experience in electrophysiology is desired but not required. Applicants should submit curriculum vitae and names and addresses of three referees to **Dr. F. Moody-Corbett, Division of Basic Sciences, Faculty of Medicine, Memorial University of Newfoundland, St. John's, Newfoundland, CANADA A1B 3V6.**

**POSTDOCTORAL POSITION**, available July 1987, supported by NIDA grant, for research on the molecular-biochemical nature of opiate receptors expressed in differentiated human neuroblastoma cells. Background desirable in molecular pharmacology, cell biology, protein analysis, or recombinant DNA technology. Résumé and names of three referees to: **Dr. W. Sadee, School of Pharmacy, University of California, San Francisco (UCSF), San Francisco, CA 94143.**

**POSTDOCTORAL POSITION** available immediately for 2 or 3 years, to study expression of erythrocyte protein antigens and blood groups. Methodologies include hybridoma and immunochemical techniques, protein purification and sequencing, and cloning of erythrocyte membrane proteins. Experience in molecular genetics preferred; knowledge of immunology and/or glycoprotein biochemistry helpful. Spring 1987 graduates acceptable. Send résumé, summary of interests, and names of three references to: **Dr. M. Telen, Division of Hematology-Oncology, Box 3387, Duke University Medical Center, Durham, NC 27710. Duke University is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION** available immediately to study the electrophysiology of cardiac myocytes using patch/whole cell voltage clamp techniques. Candidate should have a recent Ph.D. and background in cellular electrophysiology. Persons interested should send summary of research activities, curriculum vitae, and names of three references to: **Stephen Lipsius, Ph.D., Department of Physiology, Loyola University Medical Center, Maywood, IL 60153. An Equal Opportunity/Affirmative Action Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** is available immediately to work on the targeting of gene expression in transgenic animals. The position requires a Ph.D. in any area related to molecular or developmental biology and interest in control of gene expression and/or mammalian development. The successful candidate will be encouraged to pursue an independent research project. Send curriculum vitae and the names of three references to: **David Nikka, Human Resources, Department SC424, Integrated Genetics, Inc., 31 New York Avenue, Framingham, MA 01701. An Equal Opportunity Employer.**

## MICHIGAN STATE UNIVERSITY CELL AND MOLECULAR BIOLOGY PROGRAM AND DEPARTMENT OF ENTOMOLOGY

**POSTDOCTORAL POSITION:** Available 1 July 1987 to study a molecular basis for the specific protein accumulation in mosquito oocytes. Experience in protein biochemistry is required, experience in radiolabeling and receptor-binding techniques is preferred. Send curriculum vitae, list of publications, and three letters of recommendation to: **Dr. Alexander Raikhel, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115.**

**POSTDOCTORAL POSITION** available immediately to study the structure and mode of action of transformation-related proteins during tumor development. Recent Ph.D. with less than 3 years of postdoctoral experience in protein purification and sequencing. Salary will depend on experience. Send curriculum vitae and names of three references to:

**Snorri S. Thorgeirsson, M.D., Ph.D.**  
National Cancer Institute  
National Institutes of Health  
Public Health Service  
Building 37, Room 3C28  
9000 Rockville Pike  
Bethesda, MD 20892  
*NIH is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** available in the Pacific Northwest to study regulation and expression of tyrosine protein kinases. The applicant will characterize the tissue distribution and expression of a previously unidentified tyrosine kinase by Western blotting and immunoprecipitations using specific antisera to the protein. Facilities are available for microsequencing, preparation of peptide-specific antisera, and oligonucleotide probes. The individual should possess strong research skills with a background in protein biochemistry. Send curriculum vitae and names of three references to: **G. M. Clinton, Department of Biochemistry, Oregon Health Sciences University, Portland, OR 97201. An Equal Opportunity/Affirmative Action Employer.**

**POSTDOCTORAL POSITION** available to start by September 1987 to study neuroendocrine regulation of reproductive aging and prolactin influences on reproductive neuroendocrine function utilizing modern neurobiological and cellular and molecular methods. Send curriculum vitae to: **Dr. Phyllis M. Wise, Department of Physiology, University of Maryland, Baltimore, MD 21201.**

**POSTDOCTORAL POSITIONS** available to study (i) expression of recombinant von Willebrand factor in mammalian cells; (ii) sequences responsible for regulation of tissue-specific expression of the human gene for von Willebrand factor; and (iii) expression of the protein by cultured endothelial cells from patients with von Willebrand's disease. Send a brief statement of interests, the names of references, and curriculum vitae to: **Dr. Dennis C. Lynch, Harvard Medical School, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115.**

**POSTDOCTORAL POSITIONS** available in departments of anatomy, biochemistry, microbiology and immunology, pharmacology, and physiology. Applicants must have a Ph.D. or M.D. degree. Positions available during 1987 to 1988. Closing date: 1 October 1987 or until positions are filled.

Send applications to appropriate department head: **University of Arizona, Arizona Health Sciences Center, Tucson, AZ 85724. An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITIONS** available for training in molecular and cellular endocrinology of the male reproductive system with emphasis on regulation of gene expression. Ph.D.s with a background in either **MOLECULAR BIOLOGY, MOLECULAR GENETICS, BIOCHEMISTRY, IMMUNOLOGY, OR MICROBIOLOGY** are invited to apply. Send curriculum vitae to: **Dr. Frank French, Laboratories for Reproductive Biology, Box 4, MacNider Building #202H, University of North Carolina, Chapel Hill, NC 27514.**

## POSTDOCTORAL POSITIONS—IMMUNOLOGY

Two positions available immediately to study immunoregulatory functions of alveolar macrophages. Recent Ph.D. with experience in cellular immunology and biochemistry required. Send curriculum vitae and names of three references to: **Dr. H. B. Herscovitz, Department of Microbiology, Georgetown University Medical Center, Washington, DC 20007.**

**POSTDOCTORAL POSITION(S) AVAILABLE** Postdoctoral position(s) to study the immunology and biochemistry of *Toxoplasma gondii* beginning 1 September 1987. Candidates must have enthusiasm, Ph.D., or M.D. with some research experience. Interested individuals should submit curriculum vitae and names of three references to: **Lloyd Kasper, M.D., Department of Medicine, Dartmouth Medical School, Hanover, NH 03756.**

## POSTDOCTORAL POSITION MOLECULAR IMMUNOGENETICS OF HLA-D

Position available in the following areas: (i) In vitro mutagenesis of HLA-DR to study structure-function relationships. (ii) Molecular analysis of HLA-D polymorphism. The Blood Center is an excellent resource for HLA studies. Send current curriculum vitae and the names of three references to: **Dr. Jack Gorski, The Blood Center of Southeastern Wisconsin, 1701 West Wisconsin Avenue, Milwaukee, WI 53233.**

**POSTDOCTORAL POSITIONS—Protein conformational calculations and computer aided drug design.** One position is concerned with the prediction of protein tertiary structure via specially constructed potential fields. The other involves developing new methods for deducing the receptor site structure from specific drug binding data. Both openings require familiarity with computers, programming, and numerical methods. Both are available immediately at competitive salaries. Send résumé and two letters of recommendation to: **Dr. G. M. Crippen, College of Pharmacy, University of Michigan, Ann Arbor, MI 48109. An Equal Opportunity/Affirmative Action Employer.**

**TWO POSTDOCTORAL POSITIONS AVAILABLE IMMEDIATELY—**Two postdoctoral positions are immediately available to study the interaction of ethanol with cellular signal transduction systems. One project will use isolated plasma membrane fractions to study the control of phosphoinositide turnover. A background in membrane biology is required for this study. A second project will use fluorescence microscopic imaging techniques to study calcium homeostasis at the single cell level. A cell biology background with some experience in the application of microcomputer systems is preferred for this position. Send curriculum vitae, a brief statement of research interest, and names of three references to: **Dr. J. Hoek, Department of Pathology and Cell Biology, Thomas Jefferson University, Room 405, Foerderer Pavilion Building, 11th and Walnut Streets, Philadelphia, PA 19107. Equal Opportunity Employer.**

**TWO POSTDOCTORAL POSITIONS** available immediately to study (1) hormonal induction of fatty acid synthase in fetal lung and (2) purinoceptor regulation of surfactant secretion in cultured fetal and adult lung cells. Experience in molecular biology techniques required for position 1. Experience in tissue culture, stimulus-secretion coupling mechanisms, or lipid biochemistry desirable for position 2. Send curriculum vitae and names of references to: **Seamus A. Rooney, Ph.D., Department of Pediatrics, Yale University, P.O. Box 3333, New Haven, CT 06510.**

# Research Scientists

## A Responsive Research Environment

### Pioneer new applications in Biotechnology, Pathology and Pharmacology for Cardiovascular & CNS Research.

As a research-driven company, Schering-Plough can offer you the project responsibility, support and recognition to stimulate your best ideas. Joining us in one of these new positions, you'll be part of an expanding group of bold thinkers. At the forefront of some of today's most significant breakthroughs in cardiovascular and CNS research.

#### □ Cardiovascular Pharmacology

**SR. BIOCHEMIST**—Your background must include experience with growth factor receptor binding methods and cell proliferation as well as familiarity with tissue culture and related atherosclerosis research techniques.

**SR. BIOCHEMIST**—Experience in the regulation and measurement of lipoproteins and cholesterol in serum and tissues is required, as is understanding of the latest information on lipoprotein metabolism.

**SR. EXPERIMENTAL PATHOLOGIST**—Requires expertise in histological evaluation of the blood vessel wall in atherosclerosis.

**SR. VASCULAR BIOLOGIST**—You must have a strong background in the cellular physiology of the blood vessel wall in atherosclerosis and thorough familiarity with vascular cell culture techniques.

**SR. PHARMACOLOGIST/PHYSIOLOGIST**—Your expertise must encompass experimental animal

models of atherosclerosis and evaluation of drug effects on atherosclerotic processes in vivo.

#### □ CNS Pharmacology

**SR. CNS BIOCHEMIST**—You must have comprehensive knowledge of the application of fundamental methods to new drug discovery. Preference will be given to candidates with a background in any of the following: radioreceptor binding assays, HPLC and RIA assays for neurotransmitters and second messengers (cAMP and PI), enzyme kinetic techniques, and central dopaminergic and cholinergic pharmacological systems.

Candidates for all positions must have a Ph.D., or equivalent, and 0–5 years' experience within the area of interest. The ability to communicate and produce results in an interdisciplinary environment is essential.

**ASSISTANT/ASSOCIATE PHARMACOLOGISTS** (9 positions)—In addition to the above positions, Schering-Plough is accepting resumes for Assistant/Associate Scientists, to complement the Senior positions listed above. For these positions, interviews will not begin until June or July of this year.

We offer a competitive salary and outstanding benefits. Please send detailed resume, indicating position of interest, to: Louis DeMartino, Schering-Research, 60 Orange Street, Bloomfield, NJ 07003. We are an equal opportunity employer.



Schering-Plough

## POSITIONS OPEN

**TWO OPENINGS:** (i) Polymer Rheologist and (ii) Polymer Chemist. **TWO POSTDOCTORAL POSITIONS** (\$27,500 per year) are now available in the **National Center for Composites Manufacturing Science and Engineering at Rutgers, The State University of New Jersey**. One candidate will conduct both experimental and computer modeling rheology studies on highly filled (70% vo/%) molten polymer systems for injection molded ceramic-ceramic composites. Candidate must have a Ph.D. in chemical engineering, polymer science or other related areas. Modeling capabilities for filled system rheology is required. The second candidate will conduct laboratory research in the area of: (i) polymer degradation/decomposition, and (ii) polymer design/synthesis. Both areas are to optimize dispersion of ceramics in molten polymer and binder burnout for injection molded ceramic-ceramic composites. The candidate must have a Ph.D. in chemistry, chemical engineering, polymer science or other related area. Candidates should submit a letter of application along with a résumé to: **Professor Stephen C. Danforth, Department of Ceramics, PO Box 909, Rutgers University, Piscataway, NJ 08855-0909.**

**POSTDOCTORAL—RESEARCH ASSOCIATE:** Position available for research in molecular pharmacology studying the effect of nucleoside analogs on DNA methylation using recombinant DNA techniques. Experience in nucleic acid technology, microbial genetics, or protein chemistry desirable. Send curriculum vitae and references to: **Dr. Stanley Friedman, State University of New York Health Science Center at Brooklyn, Box 29, 450 Clarkson Avenue, Brooklyn, NY 11203.** *Equal Opportunity/Affirmative Action Employer. DMC #C-0069.*

**POSTDOCTORAL RESEARCH ASSOCIATE.** Positions are now available to join a multidisciplinary group studying the structure and regulation of the genes for the catecholamine neurotransmitter biosynthetic enzymes. Applicants should have a strong background in either recombinant DNA technology or neurochemistry/neuropharmacology. Send curriculum vitae, statement of research interest, and the names of three references to: **Dr. Barry B. Kaplan, Molecular Neurobiology Program, Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Pittsburgh, PA 15213.**

**POSTDOCTORAL RESEARCH POSITION.** Position available to study the regulation of tyrosine hydroxylase activity and the expression of tyrosine hydroxylase, protein kinases, or oncogenes in cultured rat pheochromocytoma cells. Experience in cellular and molecular biology or physical biochemistry helpful, but not essential. Send curriculum vitae, names of three references, and a short summary of research goals to the following: **Robert Roskoski Jr., Department of Biochemistry and Molecular Biology, LSU Medical Center, 1100 Florida Avenue, New Orleans, LA 70119.** *Equal Opportunity/Affirmative Action Employer.*

### UNIVERSITY OF CALIFORNIA, IRVINE POSTDOCTORAL RESEARCH IN PSYCHOBIOLOGY

**THE DEPARTMENT OF PSYCHOBIOLOGY, UNIVERSITY OF CALIFORNIA, IRVINE (UCI),** anticipates filling several postdoctoral research positions in the laboratories of the faculty with starting dates between 1 May 1987 and 31 December 1987. The current faculty and their research interests are: **D. Aswad** (Neurochemistry); **M. Baudry** (Cell Biology and Neurochemistry); **C. Cotman** (Synaptic Growth and Plasticity); **R. Josephson** (Comparative Physiology of Molecules); **M. L. Kean** (Linguistics and Neural Mechanisms of Language Processing); **H. Killackey** (Developmental Neuroanatomy); **M. Leon** (Developmental Psychobiology); **G. Lynch** (Physiology, Neurochemistry); **J. Marshall** (Neural Plasticity of Catecholamines); **J. McGaugh** (Memory, Storage Processes); **R. Miledi** (Synaptic Physiology and Molecular Neurobiology); **M. Nieto-Sampedro** (Cell Neurobiology and Neurochemistry); **I. Parker** (Synaptic Physiology); **D. Perkel** (Theoretical Neurobiology); **A. Starr** (Cognition, Sensation and Evoked Potentials); **K. Sumikawa** (Molecular Neurobiology); **N. Weinberger** (Neural Mechanisms of Learning); and **P. Yahr** (Neuroendocrinology and Behavior). Candidates should address inquiries to: **Postdoctoral Research Advisor, Department of Psychobiology, University of California, Irvine, CA 92717.** *UCI is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE

Available immediately to study sickle cell membranes by magnetic resonance techniques. Project involves some collaboration with clinicians. Excellent physical facilities, including EPR, NMR, and computer facilities. Opportunity for neutron scattering studies also. Experience in either red cell and membrane biochemistry or biophysical spectroscopy preferred. One-year initial appointment, renewable up to 5 years upon mutual agreement; salary dependent upon qualifications.

Send curriculum vitae and three letters of recommendation to: **Dr. Leslie Wo-Mei Fung, Department of Chemistry.**

**Loyola University  
of Chicago  
6525 North Sheridan Road  
Chicago, IL 60626  
*Equal Opportunity Employer M/F.***

**RESEARCH ASSOCIATE** with Ph.D. in electrical engineering or biophysics needed to participate in development and operation of a human motor physiology laboratory studying basic mechanisms underlying control of voluntary movement and motor disability caused by neurological disease. Physiological, electronics, and computer programming experience required. Write to: **Timothy A. Pedley, M.D., Chairman, Committee on Appointments and Promotions, Department of Neurology, College of Physicians and Surgeons, 710 West 168 Street, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL OR RESEARCH POSITION AVAILABLE IN CELLULAR IMMUNOLOGY FOR Ph.D. OR M.D.

Studies deal with immunopharmacology of immunosuppressive agents including mechanisms of action at the cellular and molecular level, and use in tolerance induction as part of a major program in transplantation. Salary range from \$24,000 to \$34,000, depending on prior experience.

Send curriculum vitae together with names of three references to: **Marvin R. Garovoy, M.D., Director, Immunogenetics and Transplantation Laboratory, HSE-520, University of California, San Francisco, Third and Parnassus Avenues, San Francisco, CA 94143.**

*The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

**POSTDOCTORAL RESEARCH POSITION AVAILABLE IMMEDIATELY—**A postdoctoral research position is immediately available in an active, interdisciplinary group studying the effects of chronic alcohol consumption on the molecular structure, composition, and function of biological membranes. Applicants should have a strong background in NMR and/or ESR characterization of biological membranes and lipid chemistry. Facilities include multinuclear Bruker AM 360 wide-bore NMR and IBM ER-200D ESR. United States citizenship or permanent resident status required. Highly competitive salary offered. Send curriculum vitae, a brief statement of research interest and names of three references to: **Dr. Theodore Taraschi, Department of Pathology and Cell Biology, Thomas Jefferson University, Room 405, Foerderer Pavilion Building, 11th and Walnut Streets, Philadelphia, PA 19107.** *Equal Opportunity Employer.*

### RADIOCHEMIST

**MEDICINAL RADIOCHEMIST** with background in biochemistry to join an active research group at the assistant professor level. Practical experience for 2 or 3 years is desirable. Send curriculum vitae to: **Abass Alavi, M.D., Chief of Nuclear Medicine, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104.** *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer. Qualified female and minority candidates are encouraged to apply.*

## POSITIONS OPEN

**POSTDOCTORAL RESEARCH SCIENTIST/INSTRUCTOR.** Behavioral motor physiologist with Ph.D. or M.D. and at least 3 years' experience in spinal cord physiology. Qualifications should include experience with operant or related behavioral techniques, surgical techniques, electrophysiology of spinal neurons, neuroanatomical tracing of anatomical pathways using transport techniques. Responsibilities will include teaching neuroanatomy to medical students. Send curriculum vitae and names of three references to: **Dr. Claude Ghez, Center for Neurobiology and Behavior, Columbia University, 722 West 168 Street, New York, NY 10032.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL OR RESEARCH POSITION AVAILABLE IN MOLECULAR- CELLULAR IMMUNOLOGY FOR Ph.D. OR M.D.

Studies deal with human lymphokine regulation and cell and gene cloning as part of a major program on the induction of transplant tolerance. Salary range from \$24,000 to \$34,000, depending on prior experience.

Send curriculum vitae together with names of three references to: **Marvin R. Garovoy, M.D., Director, Immunogenetics and Transplantation Laboratory, HSE-520, University of California, San Francisco, Third and Parnassus Avenues, San Francisco, CA 94143.**

*The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

### RESEARCH ASSOCIATE PENN STATE

To perform independent research in molecular virology of herpesviruses, to supervise research of undergraduate students and technicians, and to assist graduate students in the pursuit of their research. Experience in DNA sequencing, gene cloning, in vitro mutagenesis testing and microanalytical analyses is necessary. Computer, communication and statistical analyses skills are required as is experience in the handling, propagation, and storage of bacteria, mammalian cells, and viruses.

Minimum requirements: 3 to 4 years of postdoctoral research experience in this or a related area and an excellent record of professional accomplishments. Salary range: \$22,000 to \$27,000.

Send curriculum vitae, reprints of relevant publications and names and addresses of three references to: **Graduate Program in Molecular and Cell Biology, The Pennsylvania State University, 618 Mueller Laboratory, Box SM 1, University Park, PA 16802.**

*Equal Opportunity/Affirmative Action Employer.*

**RESEARCH ASSOCIATE,** molecular genetics of phytopathogenic bacteria: available 1 June 1987, to investigate expression of pathogenicity genes. Ph.D. and 3 years of postdoctoral experience in recombinant DNA technology required, including hybrid protein expression, DNA sequencing, and in vitro mutagenesis. Knowledge of plant inoculation techniques and plasmid biology desirable. Salary: \$21,400. Please send curriculum vitae, summary of research experience, reprints, transcripts, and three letters of recommendation by 15 May 1987 to: **Dr. Dallice Mills, Department of Botany and Plant Pathology, Oregon State University, Corvallis, OR 97331.** *OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.*

### RESEARCH FELLOW PLASTIC SURGERY RESEARCH M.D. or Ph.D.

Experience in animal research essential. Knowledge and/or experience in plastic surgery preferred. Duties include supervision of an animal laboratory, writing of scientific and clinical protocols and final preparation of manuscripts for publication. An ability to work without supervision is essential. Please send application in writing to: **Human Resources, ALLEGHENY GENERAL HOSPITAL, 320 East North Avenue, Pittsburgh, PA 15212.** *An Equal Opportunity Employer.*

## POSITIONS OPEN

**RESEARCH ASSOCIATE/VISITING PROFESSOR**—The Department of Veterinary Biosciences is seeking applications for a 2-year nontenure-track research associate position. Applicants must have a Ph.D. in either biochemistry, pharmacology/toxicology, teratology, or physiology with research experience in cellular/molecular biology. Ability to communicate and interact with other members of the research team is essential. Consideration will also be given to established investigators who wish to undertake a sabbatical project or a visiting professorship. The successful applicant will assist with the coordination of a Departmental Research Project investigating various biochemical and physiological actions of aldicarb. This individual will also be expected to develop a research project on aldicarb that utilizes his/her expertise. Salary commensurate with experience. Closing date is 30 May 1987 or until a successful candidate is selected. Send curriculum vitae and names of three references to: **Dr. Hara P. Misra, Head, Department of Veterinary Biosciences, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 24061.**

*Virginia Tech is an Equal Opportunity/Affirmative Action Employer.*

**RESEARCH GENETICIST (PLANTS)** at U.S. Department of Agriculture (USDA), Agriculture Research Service (ARS), U.S. Horticultural-Research Laboratory (USHRL), Orlando, Florida. Research position involves citrus improvement through tissue and protoplast culture and somatic hybridization to transfer traits from citrus relatives to citrus in conjunction with conventional breeding programs. Candidates must have knowledge of plant tissue and cell culture. Ph.D. is desirable. Salary is commensurate with experience (\$27,172 to \$42,341 per annum). For information on the research program, contact: **C. Jack Hearn at 305-897-7339 or write USDA, ARS, USHRL, 2120 Camden Road, Orlando, FL 32803.** For application instructions, contact: **Diane Gamble, USDA, ARS, PD, POB, Building 417, BARC-East, Beltsville, MD 20705; telephone: 301-344-1508.** Applications must be received by 1 June 1987. *An Equal Opportunity Employer.*

### RESEARCH TECHNICIAN WANTED

Research technician wanted in diverse areas of medical research at **Howard Hughes Medical Institute** at the University of Texas Health Science Center. Applicants should have B.Sc. or M.Sc. degree in biochemistry, genetics, physical chemistry, microbiology, or related fields. Send correspondence, full curriculum vitae, and references to: **Personnel, Howard Hughes Medical Institute, 5323 Harry Hines Boulevard, Suite Y4-226, Dallas, TX 75235-9050.**

**RESEARCHER SCIENTIST-MICROBIOLOGIST.** Researcher required by molecular biology laboratory to study how DNA and proteins interact in chromosomes of higher organisms. Job duties will involve examination of the structure, expression, replication, and repair of small model chromosomes through microinjection of frog cells (oocytes and somatic cells). Job requirements: Ph.D. in molecular biology or microbiology; 3 years of experience in studies of chromatin structure, including protein-DNA interactions, through microinjection techniques employing the following equipment: micromanipulator, dissection microscope, micro-forge, and needle puller. Experience in chromosome repair studied through use of x-ray radiation equipment and gel electrophoresis. Quality of experience measured by proven ability to publish studies in established scientific journals. Requires substantial experience in protein and DNA sequencing, purification of proteins by column chromatography and electrophoresis, production of antibodies against purified proteins, and purification of nucleic acids by centrifugation and gel electrophoresis using spectrophotometry to follow the procedure. Salary: \$34,000 annually. Job site: La Jolla, CA. Send this ad and a résumé to: **Job #CR 3006, P.O. Box 9560, Sacramento, CA 95823-0560** no later than 9 May 1987.

**RETROVIROLOGIST**—Ph.D. and minimum 3 years of experience in HIV research, specifically in diagnostics areas such as viral detection, isolation, and immunology. Must have proven management experience and excellent oral and written communications skills. Immediate position available in mid-Atlantic area. Competitive salary and excellent benefits. Respond to: **Box 55, SCIENCE.**

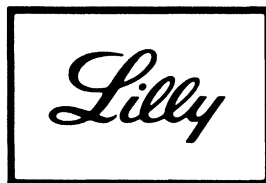
## SENIOR CENTRAL NERVOUS SYSTEM PHARMACOLOGIST

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking highly-qualified candidates for a Senior Scientist position in the Central Nervous System Research Division.

Applicants must have a doctoral degree in pharmacology or biochemistry with at least two years postdoctoral training.

The Senior Scientist will study the effects of cerebral ischemia on the metabolic aspects of nerve and glial cell function. Candidates should have a working knowledge of cerebral metabolism, membrane biochemistry, and neuroanatomy; since they will be expected to establish models of ischemia, evaluate the biochemical effects of ischemia in these models and participate in the discovery of therapeutic agents for the treatment of ischemia-related damage.

Qualified candidates should send their curriculum vitae to:



**John W. Crooks**  
Manager, College Relations (CNS)<sup>3</sup>  
Eli Lilly and Company  
Lilly Corporate Center  
Indianapolis, Indiana 46285

*Equal Opportunity Employer*

## Drug Metabolism

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking a qualified candidate to join our Drug Metabolism Department.

Primary responsibilities will be to design and analyze clinical pharmacokinetic studies in collaboration with clinical research scientists, conduct animal pharmacokinetic studies to support drug discovery and/or toxicology, supervise personnel responsible for analysis of samples in clinical pharmacokinetic studies and personnel responsible for maintaining and operating lab automation equipment.

The successful candidate is required to have:

- a Ph.D. in Chemistry, Biochemistry or related field with 0-5 years experience or a Pharm.D. with extensive experience.
- knowledge of theory and a demonstrated ability to apply pharmacokinetic principles to problem solving in drug metabolism and/or clinical pharmacology required.
- demonstrated ability to work in a multidisciplinary environment.
- excellent written and oral communication skills.
- bioanalytical methods development skills and previous experience with computing and lab automation is preferred.
- previous experience in clinical research is preferred.

Smith Kline & French Laboratories is located in suburban Philadelphia, Pennsylvania near Valley Forge in a new state-of-the-art research complex. We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. For confidential consideration, forward your C.V. and the names of three references to **Robert F. Obst, R&D Senior Employment Consultant, SmithKline Beckman Corporation, 1586 Spring Garden Street, Philadelphia, PA 19101.** We are an Equal Opportunity Employer, M/F/H/V.

**SK&F**  
A SmithKline Beckman Company



## POSITIONS OPEN

### SCIENTIFIC PROGRAMMER PROTEIN DESIGN

A position is available at **The Howard Hughes Medical Institute** for a scientific programmer to assist **Dr. Carl O. Pabo** with projects in computer-aided protein design. Programmer will work as system librarian/graphics system manager for set of programs (in FORTRAN and LISP) being developed on VAX 8500 computer and Evans and Sutherland PS 390 graphics system. Candidate should have completed B.A. or B.S. and have programming experience. Excellent benefits package, including competitive salary. Starting date is flexible (June would be fine). Submit résumé to: **The Johns Hopkins University, School of Medicine, Employment Office, 241 Hampton House, 624 North Broadway, Baltimore, MD 21205. Equal Opportunity/Affirmative Action.**

**SENIOR SCIENTIFIC ADVISOR TO THE PRESIDENT, M.D., Ph.D.** or both, to assist and advise the President on all of the company's scientific work and projects. Background in biochemistry, lipid chemistry, animal models, and clinical trials desired. Must have record of scientific publications. Imagination and creativity essential. Salary \$75,000 to \$100,000 plus stock options, New York City Office. Send curriculum vitae and cover letter with salary history in confidence: **Mr. Jan Mirsky, Anglo-Medical Corporation, 1345 Avenue of the Americas, New York, NY 10105. Equal Opportunity Employer M/F.**

Applications are invited for **TENURE-TRACK FACULTY POSITION** for the following subject areas: Chemistry (1), Human Physiology/Biology (1), and Human Anatomy/Biology (1). Master's degree or above and eligible for a California Community College teaching credential in the appropriate teaching area. Interested candidates should write for an application form to: **Roberta Womer, Yuba Community College District, 2088 North Beale Road, Marysville, CA 95901. Closing date 1 May 1987. Affirmative Action/EOE.**

### TENURE-TRACK POSITION MOLECULAR BIOLOGY

A vacancy exists at the assistant or associate professor level in the **Basic Sciences Division, Faculty of Medicine, Memorial University of Newfoundland**. Minimum qualifications required include a Ph.D. and post-doctoral experience in molecular biology. The successful candidate will be expected to establish a vigorous independent research program which could complement ongoing programs in gene regulation at the transcriptional and post-transcriptional levels, chromatin organization, molecular cloning of receptor genes for hormones and viruses, and molecular approaches to oncogenesis.

In accordance with Canadian immigration regulations, preference will be given in the first instance to Canadian citizens or landed immigrants. Interested applicants should forward curriculum vitae with an indication of research plans and names of three references, by 1 June 1987, to: **Dr. A. T. H. Burness, Faculty of Medicine, Memorial University of Newfoundland, St. John's Newfoundland, Canada, A1B 3V6**

### THEORETICAL ATOMIC PHYSICIST

Postdoctoral Research Associate sought to assess theoretical problems, develop and carry out research related to atomic structure and transitions, including relativity, quantum electrodynamics, and weak interactions; develop computational techniques, calculate and predict numerical results of experiments. Ph.D. degree and 2 years of postdoctoral experience required. Salary: \$21,000 per year. Location: Eugene, Oregon. Apply by 22 May 1987 to: **Employment Division, Attn: Job Order Number 2120316, 875 Union Street NE, Room 201, Salem, OR 97311.**

## TRAVEL GRANTS

**TRAVEL GRANTS** available from the **Entomological Society of America for INTERNATIONAL CONFERENCE ON ENDOCRINOLOGICAL FRONTIERS IN PHYSIOLOGICAL INSECT ECOLOGY-Szklara Poreba, Poland, 7 to 12 September 1987.** Send application (curriculum vitae, abstract of proposed contribution, and other pertinent information) to: **D. Hansen, 4603 Calvert Road, College Park, MD 20740. Telephone: 301-864-1334. Applications due 1 June 1987.**

## COURSE

**ELECTRON MICROSCOPY (TEM/SEM):** Biological applications. Designed for professional and laboratory personnel who desire practical hands-on training in basic techniques of TEM and SEM. Graduate credit and/or certificate awarded. Tuition: \$850. Date: 29 June through 17 July 1987. For further information and registration form contact: **Dr. Dan Scheirer, Department of Biology, Northeastern University, Boston, MA 02115; telephone: 617-437-2260.**

## PROGRAM

**Oak Ridge Associated Universities POSTGRADUATE AND FACULTY PROGRAMS AT THE NATIONAL CENTER FOR TOXICOLOGICAL RESEARCH (NCTR)**—Research efforts at NCTR focus on testing the assumptions used in assessing risks posed by toxic chemicals. Allowances vary depending on type of appointment or area of research. U.S. citizenship or PRA status required. Contact: **ORAU Postgraduate and Faculty Programs at NCTR, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117. Telephone: 615-576-3190.**

## RESEARCH GRANTS



### GRANTS

American Health Assistance Foundation is accepting research grant applications for **ALZHEIMER'S DISEASE RESEARCH** up to \$100,000.

For further information please write to: **American Health Assistance Foundation c/o Carolyn P. Krym 15825 Shady Grove Road, Suite 140, Rockville, MD 20850. Deadline: 15 August 1987.**

## SYMPOSIUM

### REDUCING RISKS FROM ENVIRONMENTAL CHEMICALS THROUGH BIOTECHNOLOGY 19 TO 22 JULY 1987

**UNIVERSITY OF WASHINGTON, SEATTLE**

Sponsored by the University of Washington, Water Pollution Control Federation, American Institute of Chemical Engineers, Environmental Protection Agency, ECOVA Corporation, U.S. Air Force Engineering Center.

Lead speakers include **James Tiedge** in microbial biology, **Kenneth Timmis** and **Stanley Falkow** in molecular biology, **Perry McCarty** in bioengineering, **William Ruckelshaus** on policy issues.

Registration fee: \$195 (\$245 after 1 June 1987), \$50 for students (\$70 after 1 June 1987). Includes boat trip for traditional NW Indian salmon bake dinner and symposium volume (Plenum Press). Poster presentations welcome. For details contact: **University of Washington, Gilbert S. Omenn/Marge Falkner SC-30, Seattle, Washington 98195. Telephone: 206-543-1144.**

## FELLOWSHIPS

**GRADUATE ASSISTANTSHIPS, MOLECULAR BIOLOGY AND BIOCHEMISTRY.** In a department emphasizing student-faculty interactions. Research in regulation of gene expression, structure and function of heterochromatin, protein-nucleic acid interactions, DNA replication, oncogenes, biochemistry of embryonic development, physical biochemistry, NMR spectroscopy, ascorbic acid, phosphate structure and mechanisms, and protein folding. Tuition remission, dependency allowance, good fringe benefits, and opportunities to teach. Only a few remaining openings. Write **Graduate Admissions, Department of Molecular Biology and Biochemistry, Wesleyan University, Middletown, CT 06457, or telephone: 203-347-9411, extension 2796 days or 203-346-0900 evenings.**

## FELLOWSHIPS

**A CHARLES H. REVSON FOUNDATION FELLOWSHIP** in basic biomedical research is available at **Cornell University Medical College**, to work with **Dr. Esther Breslow** in the Department of Biochemistry on the biochemistry of ubiquitin and ubiquitin-dependent processes. Holders of M.D. or Ph.D. degrees are invited to apply for 2-year fellowship with competitive salary. Applicants should generally have no more than 3 years of basic or clinical experience beyond the doctorate. Send curriculum vitae, three letters of reference, and indicate your area of interest, to: **The Office of Research and Sponsored Programs, Cornell University Medical College, 1300 York Avenue, Room A-131, New York, NY 10021.**

### NATIONAL INSTITUTES OF HEALTH (NIH) PUBLIC HEALTH SERVICE NATIONAL INSTITUTE OF DIABETES DIGESTIVE AND KIDNEY DISEASES (NIDDK)

**A POSTDOCTORAL FELLOWSHIP** is available immediately for a **Ph.D. or M.D.** skilled in the area of molecular biology and gene expression to join a group studying the mechanisms of secretion from bovine adrenal medulla. We are currently cloning the genes encoding synexin and related proteins [Pollard, H. *et al.*, *Vitamins and Hormones* 42, 109 (1985)]. Subsequently, these genes will be expressed in various types of cells. Contact: **Dr. Alexander Lee Burns.**

A postdoctoral fellowship is available for a **CELL BIOLOGIST/PHYSIOLOGIST** to do light and electron microscope studies in chromaffin cells. Enhanced video and immunofluorescence techniques are being used to follow membrane turnover during exocytosis and endocytosis [Lotshaw *et al.*, *Neurochem. Int.* 9, 391 (1986)]. Contact: **Dr. Charles Edwards.**

Both groups are part of a multidisciplinary laboratory with a professional staff of 20 that utilizes biochemical, electrophysiological, and ultrastructural techniques to analyze the secretion processes. These positions are open to American citizens and foreign nationals. Salary is dependent upon experience. A curriculum vitae, bibliography, and the names of three references should be sent to the listed contact at: **The Laboratory of Cell Biology and Genetics, NIDDK/NIH, 9000 Rockville Pike, Building 8, Room 403, Bethesda, MD 20892.**

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**POSTDOCTORAL FELLOWSHIPS** (two) at **The University of Chicago (UC)** to conduct research in (i) evolutionary biology and (ii) organismal or developmental biology. Fellows also provide half-time assistance in the design, coordination, and teaching of introductory biology labs. Twelve-month position beginning 1 September 1987; renewable for one year. Salary: \$18,000. Submit curriculum vitae, three letters of reference, and a statement which discusses your teaching interests and identifies a UC faculty sponsor for your proposed research. Applications should be sent before 29 May 1987 to: **Postdoctoral Search Committee, Dr. Ann Sakai, Department of Biology, The University of Chicago, 940 East 57th Street, Chicago, IL 60637. Equal Opportunity/Affirmative Action Employer.**

### CARDIAC ELECTROPHYSIOLOGY FELLOWSHIPS

**TWO FELLOWSHIP POSITIONS** are available for 1-year programs in clinical and basic cardiac electrophysiology beginning July 1987. The clinical fellowship will include invasive electrophysiologic testing of supraventricular and ventricular arrhythmias, permanent pacemaker implantation, experience with investigational antiarrhythmic agents, antitachycardia pacing, internal defibrillation, participation on the arrhythmia service, and clinical or basic research. The research fellowship will be directed toward basic animal, tissue, and cellular studies of antiarrhythmic agents, tachycardia termination techniques, signal averaging, extracellular potassium, the ischemic border zone, or other areas in basic electrophysiology. Direct inquiries to: **Steven P. Kutalek, M.D., Acting Director, Clinical Cardiac Electrophysiology, Likoff Cardiovascular Institute, Hahnemann University Hospital, Broad and Vine Streets, Philadelphia, PA 19102.**



### Postdoctoral Position -

Available immediately for Molecular Biologist to join well-established angiogenesis laboratory studying the regulation of growth factor expression in cells and tissue. Studies will include expression, transfection and in vitro mutagenesis of FGF and other growth factor genes. Applicant should have a solid background in molecular biology. Experience in protein chemistry is also desirable. Send resume and 3 references to Dr. Michael Klagsbrun, Harvard Medical School, Children's Hospital, 300 Longwood Avenue, Boston MA 02115.

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## ASSOCIATE SCIENTIST DEVELOPMENTAL TOXICOLOGY

The LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is seeking candidates for an Associate Research Scientist position in the Department of Genetic and Developmental Toxicology.

Applicants must have either a Bachelors or Masters degree with a background in developmental biology, reproductive physiology, toxicology, or similar discipline. Prior laboratory experience and knowledge of teratology or reproductive studies is desirable.

The primary responsibilities will include preparing study protocols, supervising studies, managing and evaluating data, and preparing formal reports to meet regulatory needs. This is a challenging position for a qualified scientist having good skills in verbal and written communication, and an aptitude for supervising toxicology studies.

Qualified candidates should send their curriculum vitae to:



**Ms. Carol Zapapas**  
**Personnel Representative—DA991**  
**Eli Lilly and Company**  
**Greenfield Laboratories**  
**P.O. Box 708**  
**Greenfield, Indiana 46140**

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## RNA Processing

### Postdoctoral Position

A funded position (or positions) will be available in our laboratory on or around September 1987, for an individual to work on the structure and function of eukaryotic small nuclear RNA-ribonucleoprotein complexes (snRNP's). Current projects focus on the control of U6 RNA gene expression, the 3' processing of pre-U2 RNA and the structure of U1 snRNP. Pre-mRNA:protein interactions are also being investigated.

Interested candidates should hold or be completing a Ph.D. or M.D. degree. Send a curriculum vitae including a summary of experience and current research, and the names of three individuals who could be contacted for references, to: **Dr. Thoru Pederson, C/O Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545. USA.**

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## Postdoctoral Scientist Macromolecular Sciences

The Macromolecular Sciences Department of SmithKline & French Laboratories, located in suburban Philadelphia, PA, is seeking a Postdoctoral Scientist interested in working within a multi-disciplinary research group investigating protein structure-function relationships.

The successful candidate must have:

- a Ph.D. in a chemical or biomedical science.
- experience in receptor biology, including isolation and receptor ligand interaction studies.
- experience in state-of-the-art protein isolation and characterization, including HPLC applications.
- experience in protein refolding and chemical modification of proteins preferred.
- a growing publication record indicative of productive, high quality protein research.
- excellent oral and written communication skills.

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

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and the names of three references to Robert F. Obst, R&D Senior Employment Consultant, SmithKline Beckman Corporation, 1566 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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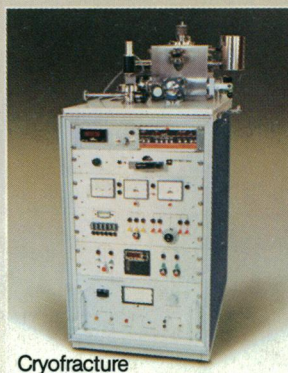
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