

freezing cold water by adding antifreeze to their systems.

As Peter Hochachka points out in his preface, three clear themes (or biases) are evident in this book. First, the biochemists and physiologists who wrote the chapters share an interest in principles of function that are universally applicable. Second, instructive variations on the universal functions appear in diverse species in similar environments and in similar species in diverse environments. Finally, most of the authors share the conviction, made familiar by Krogh, that the organism itself may be a valuable experimental parameter for illuminating particular biological problems.

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Cell Biology

Cell Motility. Mechanism and Regulation. HARUNORI ISHIKAWA, SADASHI HATANO, and HI-DEMI SATO, Eds. Liss, New York, 1986. xiv, 627 pp., illus. \$96. From a conference, Nagoya, Japan, Sept. 1984.

This book is the proceedings of a satellite conference of the third International Congress on Cell Biology. Its main merit for a North American and European audience is its strong Japanese flavor. The study of cell motility has many roots in Japan, and 29 of the 48 papers are from Japanese laboratories. The broad title of the book notwithstanding, the focus of the contributions is on the actin-based cytoskeleton and on mitosis. More precisely, the book focuses on primitive motile systems, with more than half the contributions dealing with organisms other than animals, in keeping with the significant interest Japanese workers have taken in such systems as models for higher organisms.

The volume is divided into six sections: Molecular Interaction of Actin and Myosin, Actin Regulatory Proteins, Cell Models for Movement, Cytoskeletal Involvement in Cell Division, and Structural Integrity of Microfilament System I and II, the last of these being a catchall. As an introduction, Ebashi writes an interesting and revealing personal account of the history of the study of muscle regulation. On the other hand, Bennett's summation is inappropriate to the book because of its esoteric treatment of the field and because his perspective is out of keeping with the rest of the volume. However, the editors have made the text very readable, with few typographical errors, and a good subject index has been provided.

The book makes an elegant case for the continued usefulness of primitive motile systems as models for study. Representatives of two major American laboratories, those of Korn and Pollard, present complementary general discussions of the mechanism of actin polymerization and *Acanthamoeba* actin-binding proteins, showing how much detailed biochemical information, similar to that found for higher systems, can come about from study of such a lowly organism. These papers are complemented by those of Sutoh *et al.*, Hatano *et al.*, and Isenberg *et al.*, who report on specific actin-binding proteins from other lower organisms. There are also many papers on vertebrate muscle and non-muscle myosin, actin, and the associated proteins, ranging from a nice report on conformational effects of light-chain phosphorylation on myosin by Onishi to reports on caldesmon, cofilin, gelsolin, and actinogelin. For me, one of the more exciting and novel reports (even though it is over two years old) is Higashi-Fujime's demonstration that movements of myosin filaments along unidirectional actin bundles can be visualized in vitro by dark-field microscopy. This line of investigation is now being actively pursued by several groups.

One strength of the volume is the large number of reports on the motile behavior of intact cells or cell fractions. These papers point out how far we still have to go to bridge the gap between the biochemistry of specific proteins and the events it underlies. Kamiya's report on the symmetrical oscillatory contractions of isolated plasmodial strands of *Physarum* is fascinating and raises many questions about the regulation of contraction and relaxation. Equally good reports on streaming in *Characeae* (Shimmen and Tazawa) and *Acetabularia* (Nagai and Fukui), movement of *Physarum* (Hatano), models of *Physarum* (Wohlfarth-Bottermann), axonal transport in squid axons (Allen and Weiss), and pigment movement in fish melanophores (McNiven *et al.*) make this section on cell behavior worthwhile reading. Again, the questions raised by such reports underscore the fact that our knowledge of the individual players is not matched by our knowledge of the rules of the game being played.

The section on cell division is highlighted by fantastic microscopic images, as is appropriate to the study of mitosis. This enigmatic problem has traditionally been approached by such methods, and good examples are present. The description of new mitosis-arresting drugs by Sato *et al.* may open up new avenues of research, whereas the direct experiments of Izutsu and Yoshida on the effects of microinjected dynein antibodies on mitosis may close a few doors.

The last sections of the book are dedicated primarily to actin bundles within cells. Particularly useful reports are those on stress fibers in situ by Ishikawa's and Fujiwara's groups and on the dynamics of stress fiber organization by Sanger *et al.* An exciting report by Owaribe and Masuda on the isolation of a contractile circumferential ring of actin found in retinal pigmented epithelial cells underscores their functional importance.

The papers in this book illustrate the wide range of problems approached and systems used in the study of cell motility. As in any proceedings volume there is unevenness in detail, but as a whole the volume is excellent. This is a volume that would be useful to both the biochemist and the morphologist because it emphasizes the strength and complexity of both approaches.

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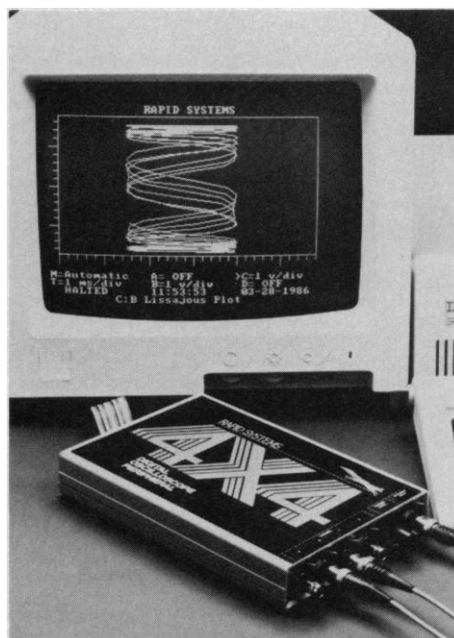
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New York, NY 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

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

POSITIONS WANTED

Cell Biologist/Microbiologist (Ph.D.) Ten years of teaching and research experience at excellent university. Presently employed in research institute doing basic cell biology. Well-informed and current in modern biology with an appreciation and interest in most facets of biology. Prior teaching experience: cell biology, molecular biology, biochemistry, microbiology, and virology. Eager to return to teaching or teaching/research position where quality teaching is valued. Box 180, SCIENCE. 10/24, 31; 11/7

Director of Theoretical and Applied Biomathematical Group. Studies on chemical engineering, mathematics, and biomathematics. Seventeen years of experience as head of scientists in math, chemistry, and biology. University professor in fifteen countries of America, Europe, and Africa. Patents in microbiology, heart, computing, and low energy effects. Scientific positions in scientific journals (United States, France, and Italy). Seeking research position in biotechnology of academy or industry. Telephone to Mr. E. Bosio: 818-445-8863. Box 182, SCIENCE. X

Earth/Space Science Instructor. Experience primarily at community college level. Have also taught high school chemistry and physics. Currently in Baltimore/Washington area, but willing to relocate. References available on request. Box 184, SCIENCE. 10/24, 31

Oceanographic Research Sabbatical. Desire year with marine laboratory/large vessel to study capture techniques and distributions of pelagic fishes near thermal fronts/other structure. Can provide 1/3 compensation beginning September 1987. J. M. Haynes, Biological Sciences, State University of New York, Brockport, NY 14420. Telephone: 716-395-5750. X

POSITIONS WANTED

Entomologist, Ph.D. anticipated 1986, seeks position as **biology professor**. Liberal arts environment preferred. Teaching experience includes physiology, toxicology, and the honey bee. Also, qualified to teach invertebrate zoology, cellular and molecular biology, evolution, and behavior. Committed to the instruction of non-majors. Research interests directed toward the effects of pheromones and xenobiotic chemicals on honey bee behavior. Box 177, SCIENCE. X

Immunochemist, Ph.D. Extensive experience in protein isolation, purification, and characterization, including solid-state peptide sequencing. Seeks research position. Box 173, SCIENCE. 10/24, 31

Oceanographer, Ph.D. with 25 years of planning, directing, and executing laboratory and field studies in both marine and freshwater nutrient chemistry, plankton and fisheries, plus teaching and administration experience, seeks research/teaching position in academia/industry. Box 181, SCIENCE. 10/24, 31

Ph.D. Many years of research experience. Bio/neurochemist; cell culture. Seeks temporary/permanent position. Box 183, SCIENCE. 10/24, 31

Research and Quality Assurance Executive. Ph.D. (biophysics), M.B.A., M. bioradiology, and BSEE. Experienced, creative technical and managerial problem solver seeks challenging opportunity with achievement-oriented organization. Bob Richards, 5705 Blue Sage Dr., Littleton, CO 80123. Telephone: 303-795-8823. 10/24, 31

POSITIONS OPEN

ACADEMIC RESEARCH ASSOCIATE position for M.D./Ph.D. experienced in molecular biology to study the roles of human Class I and II histocompatibility genes in disease susceptibility and transplantation tolerance. Duties include supervision of active research laboratory. Available January 1987. *Stanford is an Equal Opportunity Employer through Affirmative Action.*

Send résumé to: **F. C. Grumet, M.D., Department of Pathology, Stanford University, Stanford, CA 94305.**

ASSISTANT PHYSICIST—Ph.D. in physics. Three years of experience as a research physicist. Research experience should include nucleon-nucleon interactions, experiments with polarized beams and/or polarized targets, and partial wave analyses, including scattering amplitude analyses. The above evidenced by publications in refereed journals. Will be responsible for the tagging system of the Polarized Beam Project experiment, which involves a method to distinguish polarized protons from unpolarized protons. This system includes fine counters, electronic logics, memory look-up units, and programming. Will also be involved in the design, construction, and testing of the wire proportional chambers which are the major responsibility of the group within the international collaboration. Salary: \$2742 per month—40 hours per week from 8:30 a.m. to 5:00 p.m. Send résumé to: **ILLINOIS JOB SERVICE, 910 South Michigan Avenue, Room 333, Chicago, IL 60605, Attention: L. Donegan, Reference number 5711-L, An Employer Paid Ad.**

ASSISTANT PROFESSOR: Applications are invited for a position at the level of assistant professor (tenure-track) in the Department of Chemistry at Stanford University with primary research and teaching interests in inorganic or theoretical chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching undergraduates, as well as graduates. In applying, send curriculum vitae, list of publications, a brief statement of research interests (three pages or less) and, in addition, have three letters of recommendation sent to: **Professor John Ross, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305.** *Stanford is committed to Equal Opportunity through Affirmative Action in Employment, and we are especially eager to identify minority persons and women with appropriate qualifications.* Applications should be received by 15 November 1986.

POSITIONS OPEN

ANATOMIST, ASSISTANT PROFESSOR, tenure-track. Primary teaching, neuroanatomy; secondary, assist in gross anatomy laboratory. Research open; preference for neuroscience or cell biology projects utilizing TEM, SEM, cytochemistry, and/or immunocytochemistry. Please submit curriculum vitae, outline of research interests, and names of three references to: **Dr. William E. Dossel, Chairman, Anatomy Department, Creighton University School of Medicine, 2500 California, Omaha, NE 68178.**

The Yale University School of Medicine is seeking applicants at the level of **ASSISTANT, ASSOCIATE, AND FULL PROFESSOR** for the Molecular Genetics Program of the newly created Center for Molecular Medicine. M.D. or Ph.D. degree required. Research in the program will focus on the molecular biology of the nucleus and gene expression, with potential application to human disease. Successful candidates will hold regular faculty appointments in one of the existing departments of the School of Medicine.

Salary and partial research support will be provided. Curriculum vitae should be submitted by 1 December 1986 to:

**Dr. Bernard Forget, Chairman
Molecular Genetics Search Committee
Department of Internal Medicine
Yale University School of Medicine
Box 3333
New Haven, CT 06510**

Yale University is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS

The Department of Physiology and Biophysics at the University of Oklahoma at Oklahoma City, Health Sciences Center, invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. Applicants must have strong training in neural control of renal physiology or in neuroendocrinology with an emphasis on renal function. The candidate will establish an independent research program, assist in the teaching programs of the department, participate in departmental and college governance, and must have an M.D. and/or a Ph.D. degree. Interested candidates should send curriculum vitae, including a brief description of current research efforts, and three letters of reference no later than 15 January 1987 to: **Rex D. Stith, Ph.D., Chairman, Search Committee, Department of Physiology and Biophysics, Oklahoma University Health Sciences Center, Oklahoma City, OK 73190. An Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR. An opening is available for a tenure-track faculty position in immunology or molecular immunology in the Department of Biological Sciences on the Newark campus of Rutgers University. Applicants must have at least 3 years of postdoctoral training. Significant laboratory space and equipment funds will be provided. This position carries a light teaching load commensurate with a major research effort. The Department of Biological Sciences includes a number of young, interactive research faculty in a variety of molecular/cell biological fields. Please send a brief description of research interests and plans, curriculum vitae, and three letters of recommendation to: **Dr. Harvey H. Feder, Chairman, Department of Biological Sciences, Rutgers University, 101 Warren Street, Newark, NJ 07102.** Deadline for applications: 15 January 1987.

Rutgers University is an Equal Opportunity/Affirmative Action Employer.

University of California, Berkeley announces, pending budgetary approval, one or more appointments starting 1 July 1987 at the **ASSISTANT PROFESSOR** level for an **Old World prehistoric archaeologist** and a **North American archaeologist**. Applicants must have completed their Ph.D. dissertation. The deadline for receipt of all applications is 20 January 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer.* Send a letter, curriculum vitae, and the names of three referees to: **William S. Simmons, Chair, Department of Anthropology, University of California, Berkeley, CA 94720.**

POSITIONS OPEN

University of California, Berkeley announces, pending budgetary approval, one or more appointments starting 1 July 1987 at the tenured level for an **OLD WORLD PREHISTORIC ARCHAEOLOGIST** and a **NORTH AMERICAN ARCHAEOLOGIST**. The deadline for receipt of all applications is 20 January 1987. *The University of California is an Equal Opportunity/Affirmative Action Employer.* Send a letter, curriculum vitae, and the names of three referees to: **William S. Simmons, Chair, Department of Anthropology, University of California, Berkeley, CA 94720.**

UNIVERSITY OF SASKATCHEWAN ASSISTANT PROFESSOR

Applications are invited for a tenure-stream position at the assistant professor level in the area of molecular genetics.

Candidates should have a Ph.D. degree and, preferably, additional research experience in recombinant DNA techniques. Capability in the field of control of gene expression and gene transfer is essential. Preference may be given to candidates with a strong background in plant molecular biology.

The post will take effect on 1 July 1987, or earlier, if a suitable candidate is found. Send curriculum vitae and the names, addresses, and telephone numbers of at least three referees to: **Dr. John King, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0.**

The closing date is 31 December 1986, or thereafter until the position is filled.

ASSISTANT PROFESSORS

The University of Puerto Rico at Mayaguez has available immediately the following tenure-track positions for assistant professors with Ph.D.:

Parasitologist to teach the general parasitology course and do research on the local parasites of man and domestic animals.

Vertebrate physiologist to teach the human physiology course for majors and do research in areas of his interest. Applicants for both positions should be willing to coordinate the laboratory assistants for their courses, describe and teach advanced courses, and also teach periodically in the general biology courses. Spoken knowledge of Spanish or a willingness to learn the language within 3 years of being here highly desirable. Applicants should send curriculum vitae, reprints (or photocopies) of their publications, and a letter of intent to: **Professor Alice Ortiz, Acting Head, Biology Department, University of Puerto Rico, Mayaguez, PR 00708.** Closing date is 31 December 1986. *The University of Puerto Rico is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR: The Massachusetts Institute of Technology seeks an assistant professor of organic chemistry for fall 1987. Outstanding candidates, regardless of their research interests within the field, are invited to send a résumé, brief description of proposed research, and three letters of recommendation to: **Professor K. B. Sharpless, Department of Chemistry, Room 18-411, Massachusetts Institute of Technology, Cambridge, MA 02139.**

The Massachusetts Institute of Technology is an Equal Opportunity, Affirmative Action Employer and encourages applications from minorities and women.

ASSISTANT/ASSOCIATE PROFESSOR (TENURE TRACK), available August 1987. Microbiologist with postdoctoral research experience who is using molecular and recombinant DNA techniques to study a prokaryotic or eukaryotic system. The successful candidate will teach an undergraduate course in microbiology and one in cell biology each year, as well as graduate courses or seminars. We expect a commitment to excellence in teaching and an active research program involving graduate and undergraduate students. For initial consideration, applicants should send a résumé that includes statements of research and teaching plans, a list of graduate courses taken, and the names of three referees. Materials should be sent to: **The Search Committee, Department of Biological Sciences, George Washington University, Washington, DC 20052,** and received by 15 November 1986. *We are an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSORS OF BIOCHEMISTRY (tenure track). Two positions to begin September 1987 or thereafter. To teach in undergraduate and graduate (M.S. and Ph.D.) programs and to develop high quality research efforts in one of the following, or related areas: enzymology, receptor/membrane biochemistry, neurobiochemistry, or molecular toxicology. Applicants with relevant postdoctoral research experience in one of these general areas and demonstrated interest in teaching are preferred. The selected candidates will hold joint appointments with the New Hampshire Agricultural Experiment Station. Please submit résumé, statement of research interests, and have three references send letters by 17 November 1986 to: **Donald M. Green, Chairman, Biochemistry, Spaulding Hall, University of New Hampshire, Durham, NH 03824.**

UNH is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF BIOLOGY. The Department of Biology invites applications for a tenure-track position from individuals with a Ph.D. and postdoctoral experience in microbiology. Preference will be given to applicants with research interests in one or more of the following areas: applied microbiology, environmental microbiology, immunology, microbial ecology, or virology. The successful candidate is expected to teach undergraduate and graduate courses in addition to establishing a vigorous research program. Salary is competitive. Submit curriculum vitae, a brief description of the research interests to be developed at New Mexico State University, and the names, addresses, and telephone numbers of at least three references to: **Dr. Cecilio R. Barrera, Chairman, Microbiology Search Committee, Department of Biology, New Mexico State University, Las Cruces, New Mexico, NM 88003; telephone: 505-646-3733.** Application deadline: 15 December 1986. *New Mexico State University is an Affirmative Action/Equal Opportunity Institution.*

ASSISTANT PROFESSORSHIPS

Applications are invited for assistant professorships in any field of chemistry, including organic, inorganic, physical, structural, theoretical, biological, or solid state. Applicants should arrange to have three letters of recommendation sent independently and should include curriculum vitae and a short statement of research interests. *Harvard University is an Affirmative Action/Equal Opportunity Employer. Applications from female and minority group members are welcome.* Applications and supporting material should be sent no later than 30 November 1986 to: **Chairman, Search Committee, Office of the Director, Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138.**

ASSISTANT RESEARCH SCIENTIST

Two years to start; full-time; 40 hours. Responsibilities: in situ chromosome hybridization and molecular genetics of Down's syndrome and Alzheimers disease.

Qualifications: Ph.D. in cytogenetics or molecular biology.

Send inquiries to: **Drs. Devine-Gage and Jenkins, New York State Institute for Basic Research, 1050 Forest Hill Road, Staten Island, NY 10314.**

Salary: \$21,072 plus \$400 location pay.

BIOCHEMIST

to supervise

CHROMATOGRAPHY LABORATORY

We have an opening for a biochemist to supervise a small group of degreed technicians and help develop affinity chromatographic products aimed at the biotechnology market. Experience in biotechnology such as chromatography, electrophoresis, or ELISA for purification and separation of biomolecules is essential to the job.

Applicants should have a Ph.D. in biochemistry and be especially good in affinity binding of biomolecules on solid matrices. A good communication skill with customers in drug and biotechnology companies also is essential to the job. Our laboratory is located in Meriden, close to both Yale and University of Connecticut Medical School. Attractive salary and benefits. Send résumé to: **Connie Bennice, Personnel Manager, CUNO, 47 Main Street, Talcottville, CT 06066. SUBSIDIARY OF COMMERCIAL SHEARING, INC. An Equal Opportunity Employer, M/F/H.**

POSITIONS OPEN

ASSISTANT TECHNICAL DIRECTOR

Ph.D. background in immunology or hematology. Preferably supervisory experience in a routine testing laboratory desired for position as assistant technical director at the New York Blood Center.

The position involves responsibilities in the QC/QA area and offers opportunity for participation in both basic and clinical research. Salary open. Send curriculum vitae naming three references to: **Dr. Alan Waldman, Technical Director, Greater New York Blood Program, 310 East 67 Street, New York, NY 10021. Equal Opportunity Employer.**

ASSOCIATE RESEARCH PHYSICIST UNIVERSITY OF CALIFORNIA (UC), IRVINE

The Department of Physics, UC Irvine, has an opening for an associate research physicist in experimental plasma physics. Ph.D. in plasma physics and 5 to 6 years of experience required. Applicant will assist in management of Pulse Power Laboratory, Controlled Fusion and Accelerator Research. Please send résumé with names and addresses of three references to: **Professor Norman Rostoker, Department of Physics, University of California, Irvine, CA 92717. An Affirmative Action/Equal Opportunity Employer.**

BIOCHEMISTS

Tenure-track faculty positions at all ranks. Candidates should be interested in developing strong and independent research with long-term growth potential. Teaching includes medical, dental, and graduate students at a sizable medical complex. Biochemistry Department with excellent new facilities is undergoing substantial expansion. Salary commensurate with experience and competitive. Curriculum vitae, brief statement of present and future research interests, and three letters of recommendation should be sent to: **Dr. Robert D. Wells, Chairman, Department of Biochemistry, The University of Alabama at Birmingham, Schools of Medicine and Dentistry, University Station, Birmingham, AL 35294. An Equal Opportunity/Affirmative Action Employer.**

BIOCHEMIST. The Department of Chemistry at San Francisco State University invites applications for an anticipated tenure-track assistant professorship in biochemistry to begin fall 1987. The candidate should have a Ph.D. in biochemistry and preferably postdoctoral experience. The successful candidate is expected to develop an active, fundable research program involving undergraduate and M.S. degree students and also will be committed to excellence in teaching. Send curriculum vitae, description of research plans, and three letters of recommendation by 15 December 1986 to: **Dr. Daniel Buttlare, Chair, Department of Chemistry, San Francisco State University, San Francisco, CA 94132. Equal Opportunity/Affirmative Action Employer.**

The College of Staten Island The City University of New York (CUNY) BIOLOGY FACULTY POSITION

The Department of Biology seeks candidates for a full-time, tenure-track position for a geneticist employing molecular-biochemical techniques. Ph.D. and postdoctoral experience required. Teaching experience and grant activity desirable. Salary and rank commensurate with experience, background, and professional qualifications. To start 1 September 1987. Send curriculum vitae and names of three references by 1 December 1986 to:

**Dr. Richard Resch
Dean of Science and Technology
THE COLLEGE OF STATEN ISLAND/CUNY
130 Stuyvesant Place,
Staten Island, NY 10301**

An Equal Opportunity/Affirmative Action Employer.

CELL BIOLOGIST/IMMUNOLOGIST. New tenure-track, assistant professor position teaching freshman cell biology, general biology, and upper level immunology. Fall 1987. Emphasis on teaching excellence. Salary commensurate with experience. Ph.D. required. Curriculum vitae, three letters of recommendation, transcripts to: **Ed Leuck, Department of Biology, Centenary College, Shreveport, LA 71104. Telephone: 318-769-5212. Deadline 21 November 1986.**

Associate Director Pharmacokinetics



An equal opportunity employer

Pfizer, a leading company in pharmaceutical research and innovation, has an opportunity for an experienced pharmacokineticist to join a multi-disciplinary drug development team of pharmacologists, toxicologists and clinicians in the Department of Clinical and Scientific Affairs. The successful candidate will design, initiate and monitor clinical and pre-clinical studies for pharmacokinetic, bioavailability and drug metabolism assessments. In addition, you will evaluate and summarize pharmacokinetic/pharmacodynamic data and prepare regulatory submissions. As pharmacokineticist, you will review pre-clinical and clinical data on drugs undergoing licensing evaluation and screen research proposals for scientific interest to Pfizer. Involves approximately 5-10% international travel.

The successful candidate will possess a PhD in Pharmaceutical Sciences or a Pharm D with 5-8 years of experience in pharmacokinetic/biopharmaceutics. You should be a self motivator with excellent interpersonal, analytical, organizational and oral and written communication skills.

Explore your exceptional career prospects with Pfizer that include competitive salaries commensurate with experience, outstanding benefits and ample opportunities for professional growth. Send your resume with salary history to: **Cathlin L. Green, Sr. Personnel Associate, Pfizer Inc., 235 East 42nd Street, New York, NY 10017. Only candidates with appropriate backgrounds will be contacted.**

Post Doctoral Positions in:

- ligand-receptor interactions
- signal transduction
- oncogene/growth factor function

Oncogene Science, Inc., in its continuing commitment to excellence in basic oncogene/growth factor research for the development of products for the diagnosis, monitoring and treatment of human cancer, has several post doctoral openings in the areas of; ligand-receptor interactions, signal transduction, and oncogene/growth factor function.

Successful applicants will be recent doctoral graduates with strong academic credentials and proven capabilities in biomedical research. Research skills of particular interest to the Company include cDNA cloning and expression, gas phase protein sequencing, enzymology and protein biochemistry.

Oncogene Science, Inc. is expanding to new research and administrative facilities in early 1987. The Company will be strategically located on the North Shore of Long Island minutes east of New York City providing ready access to major academic institutions.

Oncogene Science, Inc. offers excellent compensation and benefit packages. Qualified candidates should send their resume, including a list of publications and three references to: **Director of Basic Research, Oncogene Science, Inc. 222 Station Plaza North, Mineola, New York 11501.**

**Oncogene
science, inc.**
222 Station Plaza North
Mineola, New York 11501

POSITIONS OPEN

CELL BIOLOGIST-DARTMOUTH

The Department of Biological Sciences, Dartmouth College, invites applications for a full-time, tenure-track position in cell biology at the assistant professor level beginning July 1987. Qualifications include a Ph.D. and at least 2 years of postdoctoral experience. Applicants employing biochemical, immunological, or molecular techniques in cell motility and/or neurobiology are especially encouraged to apply. The successful candidate will be expected to initiate a vigorous, independent research program, to interact with other cell, developmental, neuro- and molecular biologists, and to participate actively in the undergraduate and graduate teaching program of the department. Please send letters of application, including curriculum vitae, reprints, statement of research and teaching interests, and at least three letters of recommendation by 10 January 1987 to: Search Committee, Department of Biological Sciences, Dartmouth College, Hanover, NH 03755. *Dartmouth College is an Equal Opportunity/Affirmative Action Employer.*

CHAIR DEPARTMENT OF HEART AND HYPERTENSION RESEARCH

A Search Committee of the Cleveland Clinic Foundation seeks a chairman for the Department of Heart and Hypertension Research within the Research Institute of the Cleveland Clinic Foundation. This department consists of established investigators working in areas of hypertension, cardiac function and structure, coronary physiology, cardiovascular biochemistry, and pharmacology. The department is well positioned to interact with several basic research and clinical programs within the foundation including the Departments of Cardiology, Thoracic and Cardiovascular Surgery, Cardiothoracic Anesthesiology, Nephrology and Hypertension, Endocrinology, and Peripheral Vascular Disease. It is expected that the chairman will maintain a vigorous research program, administer this department, and play an active role in its future development.

Applicants must possess an M.D., Ph.D., or equivalent degree, and be a distinguished scientist of national and international reputation with a solid background and demonstrated administrative and leadership skills.

The position is available immediately with a negotiable starting date. Salary is competitive and will be commensurate with qualifications and experience. The number of additional staff positions is negotiable as well.

The Research Institute of the Cleveland Clinic Foundation is a basic biomedical research group. Eight departments comprise in excess of 150 scientists and pre- and postdoctoral trainees.

Applicants should send their curriculum vitae to: Dr. Shattuck W. Hartwell, Jr., Chairman, Search Committee for Heart and Hypertension Research, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44106.

The Cleveland Clinic Foundation is an Equal Opportunity Employer.

THE CLEVELAND CLINIC FOUNDATION

9500 Euclid Avenue, Cleveland, Ohio 44106

DEPARTMENT CHAIR. The University of Southern Mississippi invites applications for chair, Department of Chemistry, to provide vigorous leadership for a growing, Ph.D.-granting department having 20 faculty members with expertise in traditional areas of chemistry, as well as biochemistry and polymer chemistry. Applicants must have a strong commitment to research, external funding, and quality education. The department has 40 graduate and 70 undergraduate majors, modern facilities and equipment, and is guided by an active, 30-member External Advisory Board. Attractions include competitive salaries, mild winters, a progressive community, and proximity to the Gulf Coast and New Orleans. Send résumé, research plans, and names and telephone numbers of three references to: Dr. Grayson Rayborn, Southern Station, Box 5165, University of Southern Mississippi, Hattiesburg, MS 39406-5165. Applications received after 15 December 1986 cannot be assured of consideration. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CHAIRPERSON DEPARTMENT OF MOLECULAR AND CELLULAR PHYSIOLOGY (DMCP) STANFORD UNIVERSITY SCHOOL OF MEDICINE

Stanford University is seeking applicants for the position of professor and chairperson of the Department of Molecular and Cellular Physiology. This department is one of four interrelated academic units to be located in the Center for Molecular and Genetic Medicine. The chairperson will have the opportunity to establish a group of approximately seven faculty, focusing primarily on problems related to intracellular, intercellular, and interorgan communications. Related themes would center on the cell as the unit of biological organization whose properties, responses, interactions, and functions can be studied in molecular terms. The teaching responsibilities of this department will include physiology to medical students and advanced graduate courses for graduate students and medical students which will reflect the interests of the faculty.

Applications, accompanied by curriculum vitae, should be mailed to: James A. Spudich, The DMCP Search Committee, Department of Cell Biology, Stanford University School of Medicine, Stanford, CA 94305.

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

CYTOGENETICS/CELL CULTURE TECHNOLOGIST—Brigham and Women's Hospital, a 720-bed Harvard-affiliated teaching hospital located in the heart of the Harvard medical community, is seeking a technologist to prepare and process cultures for chromosome analysis from blood tissue and amniotic fluids. If you have a bachelor's degree in a related field and would like to be a part of the exciting work we do here, please CALL US COLLECT at 617-732-5790. We offer excellent salaries and benefits. **BRIGHAM AND WOMEN'S HOSPITAL**, 10 Vining Street, Boston, MA 02115. *An Equal Opportunity Employer, M/F/H.*

DEVELOPMENTAL BIOLOGIST. Tenure-track position in the Department of Biology at the level of assistant or associate professor. Applicant should have a molecular or cellular orientation in developmental biology. Postdoctoral experience is preferred. Teaching responsibilities will involve participation in upper level courses, to include a course in developmental biology, and an introductory biology course. A strong commitment to teaching undergraduate students is required. St. Olaf is a coeducational liberal arts college of the American Lutheran Church.

Submit curriculum vitae, transcripts, names of three individuals who may be contacted for reference, and a summary of research interests or ongoing projects to: Dr. Ted R. Johnson, Chair, Biology Department, St. Olaf College, Northfield, MN 55057. Closing date: 15 December 1986. *An Equal Opportunity Employer.*

DEVELOPMENTAL BIOLOGIST

The Department of Biology at the University of California, Los Angeles, invites applications for a tenure-track position in animal developmental biology. The appointment may be made at any rank. Responsibilities include the teaching of an undergraduate upper division course in animal development. We are looking for outstanding candidates with a record of creative and innovative research with strong interests in, and imaginative approaches to, problems of animal development. Although the search is not limited to any one area, the committee is particularly interested in candidates working in areas such as cellular and molecular aspects of developmental neurobiology, pattern formation, and cell-cell interactions during development. Please send curriculum vitae, statement of research goals, and arrange for three letters of reference to be sent to:

Developmental Biology Search Committee
Department of Biology
University of California, Los Angeles
Los Angeles, CA 90024

Closing date for applications is 1 December 1986. *The University of California is an Affirmative Action/Equal Opportunity Employer. We encourage applications from individuals of minority backgrounds and from women.*

POSITIONS OPEN

Positions are available, from time to time, in the Department of Anesthesiology, Yale University School of Medicine, at the CLINICAL AND RESEARCH FACULTY level. Interested individuals should apply to:

Paul G. Barash, M.D.
Chairman, Department of Anesthesiology
Yale University School of Medicine
333 Cedar Street
New Haven, CT 06510

Please respond by 1 January 1987.

Equal Opportunity/Affirmative Action Employer. Qualified women, minority group members, and handicapped individuals are encouraged to apply.

The Department of Radiology at the Medical College of Virginia (MCV) in Richmond, VA, is seeking a qualified individual for a **COMPUTER SCIENTIST POSITION** in our department. The candidate should have a master's degree in computer science or B.S. degree in computer science or mathematics with 3 years of experience with medical computer programming. The individual will be assisting and networking existing nuclear medicine computer systems with micro VAX, assisting the department in the development and implementation of a departmental computer system, and developing nuclear medicine imaging computer software programs. Submit curriculum vitae to: Melvin J. Frattin, M.D., Department of Radiology, P.O. Box 470, MCV Station, Richmond, VA 23298-0001. Curriculum vitae must be received by 15 November 1986. *MCV is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

COMPUTER SYSTEM MANAGER. Immediate opening for experienced computer system manager to be responsible for data processing operations in the areas of collections and research and administration. Will develop and implement a broad-scale, long-range plan in database management, and hardware and software resource utilization. Will manage budget and supervise DP support staff. Successful candidate will possess excellent communication and analytical skills, the ability to deal with all levels of the organization, and demonstrated managerial abilities, preferably within a research or academic environment. Knowledge of UNIX, C, MS-DOS, database design, and products available in the UNIX and MS-DOS markets essential. Experience with VAX or other UNIX minicomputers helpful. Send résumé, cover letter, and salary requirements to: **Human Resources, FIELD MUSEUM OF NATURAL HISTORY**, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605. *Equal Opportunity Employer, M/F.*

ECOLOGIST. Establish biological monitoring program for targeted natural communities and species on natural area preserves in western United States. Advanced degree in plant community ecology or related field required. Must have demonstrated experience in sampling design, statistics appropriate to field data, and experience with personal computers and statistical software packages. Familiarity with western plant communities and fire ecology desired. Good communication skills and commitment to conservation essential.

LAND STEWARD. Second position, similar to above, but broader duties at state level in Montana/Wyoming field office. Both positions open January 1987. Send résumé, transcripts, and three references by 15 November to: Dr. David J. Mladenoff, Director of Stewardship, Western Region, The Nature Conservancy, 785 Market Street, San Francisco, CA 94103. *Equal Opportunity Employer.*

ECOSYSTEM ECOLOGIST—The School of Forestry and Environmental Studies, Yale University invites applications for a faculty position in ecosystem ecology. We seek a well-qualified individual with broad interests who will develop a strong research program and who is willing to teach at both the undergraduate and professional and graduate levels. Please send a résumé, bibliography, three letters of recommendation, and a personal statement of interest to: Professor William H. Smith, School of Forestry and Environmental Studies, Yale University, 370 Prospect Street, New Haven, CT 06511. Deadline for receipt of applications is 15 December 1986. *Yale University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY AND POSTDOCTORAL POSITIONS IN NEUROBIOLOGY. Applications are invited for two faculty positions (tenure-track, rank open) and two postdoctoral positions in cellular or systems neurophysiology, neuropharmacology, or neuroanatomy. Faculty will have appointments in an appropriate medical school department. Limited teaching in either English or Spanish. Send curriculum vitae, reprints, and names of three references to: **Dr. R. K. Orkand, Institute of Neurobiology, University of Puerto Rico Medical Sciences Campus, 201 Boulevard del Valle, Old San Juan, PR 00901.**

FACULTY POSITION IN PROKARYOTIC MOLECULAR GENETICS

Applications are invited for junior tenure-track faculty positions in the Department of Microbiology. We are interested in applicants with research interests in prokaryotic molecular biology and/or bacterial genetics. Candidates should have made significant accomplishments in research and should be prepared to maintain an active, independent research program. Excellent salaries, start-up funds, and research facilities are available. Teaching responsibilities are minimal and include participation in courses for graduate, medical, and dental students. The department, among the most well funded in the nation, provides a stimulating scientific environment and administers several NIH Institutional Fellowship programs that are available to provide stipend support for predoctoral and postdoctoral students.

The basic science departments of the University of Alabama at Birmingham Medical Center continue to recruit outstanding faculty with strong research programs in biochemistry, cellular biology and physiology, immunology, animal virology, and other areas. A particular strength of the institution is the close cooperation between clinical and basic science researchers in areas such as cancer biology, arthritis and rheumatoid diseases, immunodeficiency disorders, bacterial and viral diseases, oral biology, and muscular-skeletal disorders.

Applicants should submit curriculum vitae, a statement of research plans, and the names of three people from whom letters of recommendation can be requested. Applications should be sent to: **Gillian Air, Chairman, Molecular Genetic Search Committee, Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL 35294.**

An Equal Opportunity/Affirmative Action Employer

PRINCETON UNIVERSITY PLASMA PHYSICS LABORATORY

Princeton University and the Plasma Physics Laboratory (PPPL) are seeking candidates for **Senior Tenured Appointments** to be made in appropriate academic departments of the university. Preference will be given to candidates with distinguished records of research in plasma physics, in closely related subfields of physics, or in allied disciplines in the physical sciences, mathematics, or engineering. Please send a letter of application and curriculum vitae to: **Professor Thomas H. Stix, Associate Director for Academic Affairs, Princeton Plasma Physics Laboratory, Post Office Box 451, Princeton, NJ 08544.** Closing date, 15 December 1986.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

The Department of Geology is soliciting applications for an anticipated **TENURE-TRACK FACULTY POSITION IN GROUND WATER HYDROLOGY** to begin August 1987. Areas of related interest within the 23-member department include hydrogeology, low temperature geochemistry, isotope geochronology, and environmental chemistry. The successful candidate is expected to develop a strong research program, and teach graduate and undergraduate courses that complement the existing hydrogeology—low temperature geochemistry areas of specialty.

Send letters of application accompanied by curriculum vitae, description of research interests in ground water modeling, and names of three referees to: **Professor Frank T. Caruccio, Ground Water Search Committee, Department of Geology, University of South Carolina, Columbia, SC 29208.** Closing date for applications is 31 December 1986.

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

HOFFMANN-LA ROCHE

Molecular Biology

Roche Diagnostics Systems is a leader in its field and a critical part of Hoffmann-La Roche's commitment to a healthier tomorrow through the development of innovative, highly sophisticated medical testing methods. Challenging opportunities are currently available for both Associate and Senior Scientists in the area of Molecular Biology.

Associate and Senior Scientist—We are seeking both PhD and MS level molecular biologists with extensive experience in DNA Sequencing, DNA-DNA Hybridization and thorough knowledge of recombinant DNA techniques. Familiarity with DNA chemistry is preferred and industrial experience is highly desirable.

Discover your true potential with Roche Diagnostic Systems where the environment is conducive to personal and professional achievement. Salaries are fully commensurate with both background and ability and benefits are excellent. Please send your resume with current salary information to: **Fran Newman**



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CSIRO

RESEARCH FELLOW

(Physicist)

A\$28,107–A\$34,681

**DIVISION OF TEXTILE PHYSICS
RYDE NSW**

GENERAL: An innovative scientist is required to participate in an expanding program of fundamental research into the physics of clothing comfort. The position is a challenging one. The area has not previously been subject to detailed scrutiny at the fundamental level, and so will require the development and implementation of novel methods of approach, together with original measurement techniques.

As Australia's main strategic research organization, CSIRO's stated role is applications research in support of major sectors of the Australian economy, and the effective transfer of its results to users. The Division of Textile Physics is involved in research in diverse areas, including fibre and fabric physics, image analysis, advanced measurement systems, gas and liquid filtration, and robotics.

DUTIES: The applicant will join a group of scientists whose task is to provide detailed information on the performance of textile materials. The successful applicant will be responsible for objective measurement programs, including the in situ measurement of moisture uptake and transport in clothing, and for the development and application of data-logging equipment for the measurement of factors which determine clothing physiological performance.

QUALIFICATIONS: A PhD degree or equivalent qualifications in physics or another relevant discipline is required. The successful applicant will have an up-to-date knowledge of basic and applied physics, and a demonstrated ability to apply this knowledge in original and, if necessary, unorthodox ways. The ability to initiate, plan, and complete experimental programs; supervise technical staff; interact with other members of a team; and work toward defined program goals is essential.

TENURE: A term of four years with Australian Government superannuation benefits available.

ENQUIRIES: Further information can be obtained by telephoning (02) 80-0211.

Technical enquiries: Dr Barry Holcombe

General enquiries: Mr Warren Bailey

APPLICATIONS: Stating relevant personal particulars, including details of qualifications and experience, the names of at least two professional referees and quoting reference No C8699, should be directed to:

**The Chief
CSIRO Division of Textile Physics
338 Blaxland Road
RYDE NSW 2112
AUSTRALIA**

By 4 weeks from date of publication.

CSIRO IS AN EQUAL OPPORTUNITY EMPLOYER

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA SAN FRANCISCO

The Oncology Division at San Francisco General Hospital, (UCSF) seeks to hire a new **FACULTY MEMBER** at the assistant clinical professor level. The person hired will be responsible for the care of in- and out-patients with solid tumors. He/she will have teaching responsibilities for UCSF Medical Oncology Fellows and house officers, in addition to supervising an Oncology Clinical Nurse Specialist. Send curriculum vitae to: **San Francisco General Hospital, 995 Potrero Street, Building 80, Ward 84, San Francisco, CA 94110.**

The University of California, San Diego (UCSD), invites applications for a tenure-track **FACULTY POSITION** at the Assistant Professor level in the general area of mammalian genetics/mammalian molecular genetics/mammalian developmental genetics.

Salary will be commensurate with qualifications and experience. Ph.D. required. Appointee must have postdoctoral training and is expected to conduct a vigorous research program. The position will be available beginning July 1987.

Applicants should send curriculum vitae, bibliography, and names of four references, by 1 December 1986 to: **Carrie Garnett, Mammalian Genetics Search Committee, UCSD, Department of Biology, B-022, La Jolla, CA 92093.**

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

UNIVERSITY OF CALIFORNIA-RIVERSIDE FACULTY POSITION ASSISTANT PROFESSOR Organismal Biology

The Department of Biology, University of California, Riverside, invites applications for a tenure-track position in animal biology with focus at the organismal level. The appointment will be effective 1 July 1987 with duties commencing in September. Applicants should have at least 1 year of postdoctoral training, demonstrated excellence in research, and a commitment and demonstrated ability to teach both undergraduate and graduate students. We are particularly seeking an individual with interests and expertise in neural and/or endocrine control mechanisms. Acceptable research areas include, but are not limited to, organismal physiology, behavior, and functional morphology. To apply, send curriculum vitae, statement of research and teaching interests, copies of representative publications, and three letters of recommendation by 15 January 1987 to: **Organismal Biology Search Committee, Department of Biology, University of California, Riverside, CA 92521.** *The University of California is an Equal Opportunity/Affirmative Action Employer and qualified minority and female candidates are encouraged to apply.*

FACULTY POSITION IN MICROBIOLOGY

The Dr. William M. Scholl College of Podiatric Medicine invites applications for a full-time position in the Department of Microbiology and Pathology. A Ph.D. in microbiology or related area is required. We offer faculty rank and salary commensurate with professional experience and achievements. The position is available 1 July 1987.

The major duty is teaching a comprehensive course in medical microbiology, including laboratory, to second-year medical students. Limited intramural funds are available to assist in personal research interests.

Qualified applicants may submit a letter of application, curriculum vitae and supporting materials, including the names of three references, by 15 December 1986 to:

Mr. Harold J. Stronach

Director of Human Resources

**Dr. William M. Scholl College of Podiatric Medicine
1001 N. Dearborn Street
Chicago, IL 60610**

An Equal Opportunity Employer

POSITIONS OPEN

FACULTY POSITIONS

The Department of Anatomy and Cell Biology seeks applicants for two tenure-track faculty positions at the junior and senior level. Applicants should have a strong research program in cell or molecular biology, immunology, or neuroscience. Salary, generous start-up funds, and technical support will be provided. In addition, core hybridoma, DNA sequencing, and electron microscopic facilities will be available. Experience teaching gross anatomy or willingness to learn is required. Send résumé, a summary of current and future research activities, and three letters of recommendation to: **Eva Brown Cramer, Ph.D., Chair, Search Committee, Department of Anatomy and Cell Biology, State University of New York, Health Science Center at Brooklyn, 450 Clarkson Avenue, Box 5, Brooklyn, NY 11203.** DMC number 0024. *Equal Opportunity Employer.*

FACULTY POSITION IN AREAS RELATED TO CONDENSED MATTER, OPTICAL OR SPACE PHYSICS UNIVERSITY OF MARYLAND AT COLLEGE PARK

Applications are invited for tenured or tenure-track faculty positions at all ranks in the Institute for Physical Science and Technology. Appointments may be made jointly with the Department of Physics and Astronomy or entirely in the institute. Successful candidates will have demonstrated the ability to establish a strong experimental or theoretical research program, and for a tenured appointment will have an outstanding international reputation for research in their field. Areas of current interest include both theoretical and experimental work in condensed matter physics, statistical physics, polymer physics, optical physics, spectroscopy, space plasma physics, and nonlinear physics and dynamical systems. Teaching requirements of less than one course per semester are associated with these positions. Letters of application, together with curriculum vitae, list of publications, and the names and addresses of at least three referees should be sent to: **Director, Institute for Physical Science and Technology, University of Maryland, College Park, MD 20742.** Applications received by 15 December 1986 are assured consideration. *The University of Maryland is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION MOLECULAR GENETICS

The Center for Genetics is seeking candidates for one or two faculty positions in the area of mammalian molecular biology and genetics. The positions, starting on or after 1 July 1987, will be at the level of assistant professor up to full professor, depending on the candidate's qualifications, and will be either tenure-track or tenured. Candidates must have a Ph.D. or its equivalent, plus 2 years of postdoctoral experience in mammalian molecular genetics or related areas. Significant research accomplishments and/or evidence of outstanding research potential will be key considerations. Applicants should provide curriculum vitae, names and addresses of four references, and a brief statement of research interests and plans. To receive fullest consideration, applications should be received by 15 December 1986. Send applications to:

Dr. Richard L. Davidson

Director, Center for Genetics

University of Illinois College of Medicine

808 South Wood Street

Chicago, IL 60612

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

POSTDOCTORAL POSITION available in January 1987 for an individual with training in experimental pathology or pharmacology. Studies focus on the development of new approaches to tumor therapy, using inhibitors of specific metabolic pathways in cultured cells and animal tumor models. Send curriculum vitae and the names of three references to: **William Maltese, Ph.D., Division of Pediatric Neurology, College of Physicians and Surgeons of Columbia University, 722 West 168 Street, New York, NY 10032.** *Columbia University takes Affirmative Action to ensure Equal Opportunity.*

POSITIONS OPEN

CELL BIOLOGIST/MOLECULAR BIOLOGIST

FACULTY POSITION available in the Division of Pediatric Neurology for a scientist interested in the molecular or cellular aspects of growth and development. The applicant will be expected to maintain an independent research program that will complement existing programs focusing on the biology of neural tumors and inherited metabolic errors. Excellent facilities are available, and collaborative arrangements with the Comprehensive Cancer Center or an appropriate basic science department are possible. Academic rank and salary will be determined by the applicant's credentials and experience. Interested investigators should direct their curriculum vitae, research summary, and references to: **Darryl C. De Vivo, M.D., Director of Pediatric Neurology, College of Physicians and Surgeons, Columbia University, 710 West 168 Street, New York, NY 10032.** *Columbia University takes Affirmative Action to ensure Equal Opportunity.*

FACULTY POSITION IN MOLECULAR GENETICS OF MENTAL ILLNESS

The Department of Psychiatry of the School of Medicine, University of California, San Francisco (UCSF), invites applications for a faculty position involving responsibility for the development and coordination of a new departmental program in the genetics of mental illness. The position will be available July 1987 and would be at the assistant or associate professor level, with the possibility of a joint appointment in a relevant department. Candidates may hold an M.D. or Ph.D. degree, have a commitment to studies of the genetics of mental illness and expertise in human linkage analysis and molecular genetics. Please send statement of interest, curriculum vitae and bibliography, and names and addresses of three references to: **Victor I. Reus, M.D., Search Committee Chair, UCSF/Langley Porter Psychiatric Institute, Box 39A, 401 Parnassus Avenue, San Francisco, CA 94143-0984.** Applications must be received by 31 December 1986. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

FACULTY POSITIONS AT RUTGERS UNIVERSITY

The Waksman Institute of Microbiology and the Departments of Chemical and Biochemical Engineering and Chemistry of Rutgers, The State University of New Jersey, and the Center for Advanced Biotechnology and Medicine of New Jersey invite applications and nominations for two tenured professional positions in protein structure and function at the New Brunswick/Piscataway campus.

One position will be associated with the curatorship of the fermentation and cell production facilities, which will be equipped with new computer-controlled vessels and state-of-the-art analytical equipment. Both persons should have a strong background in biology, as well as protein chemistry. The successful candidates will join a multidisciplinary and rapidly expanding group of investigators in the study of biomolecular structure, function, and design. We seek individuals with demonstrated ability and commitment to conduct vigorous research programs, to interact with molecular biologists, and to teach at the graduate level. These positions were originally announced in 1985, but implementation was delayed during modernization of the facilities. Access to the supercomputer at the newly established John von Neumann Center for Scientific Computing, to several VAX computer systems, and to computer graphics equipment provides excellent computational capabilities for this program. Salary and rank will be commensurate with professional qualifications. Applications must include a description of research interests, an up-to-date publication list, curriculum vitae, and the names of five persons prepared to provide professional references. Applications will be accepted until the position is filled. Direct applications and nominations to: **Professor J. Oliver Lampen, Chairperson, Biomolecular Studies Search Committee, Waksman Institute, Rutgers, The State University of New Jersey, P.O. Box 759, Piscataway, NJ 08854-0759.** *Rutgers University is an Equal Opportunity/Affirmative Action Employer.*

Postdoctoral Fellow/Scientist

California Biotechnology Inc., a rapidly growing biotechnology company engaged in the development of diagnostic and therapeutic products is seeking an outstanding individual to join its Molecular Genetics group.

Qualified candidates must have a Ph.D. and 0-2 years postdoctoral experience in the fields of Molecular Biology, Human Genetics and Statistics. The applicant will have demonstrated scientific creativity and ability to interact well with others.

We offer a stimulating research environment with a competitive compensation and benefits package. For consideration please forward curriculum vitae and names of three references in confidence to: California Biotechnology Inc., Human Resources, Dept. MF-PF, 2450 Bayshore Parkway, Mountain View, CA 94043. An equal opportunity employer.

CAL  BIO

Staff and Senior Scientist Positions

The Endocrine and Reproductive Biology Group of the Worcester Foundation for Experimental Biology is recruiting both junior and senior level faculty.

The Worcester Foundation is committed to an active interdisciplinary approach to the biological sciences. Talented individuals in all areas of endocrine and reproductive biology, as well as those in other disciplines with an active interest in reproductive and endocrine problems are encouraged to apply. We offer liberal institutional start-up funds and competitive salaries.

Current areas represented include: Molecular endocrinology; reproductive physiology; neuroendocrinology; gametogenesis and fertilization; membrane biochemistry and biophysics; peptide hormone, steroid, and prostaglandin biochemistry.

The Foundation is situated on a wooded 100 acre campus only a few minutes from the University of Massachusetts Medical Center and in close proximity to all major New England academic and research institutions. Send resume, a statement of research plans and interests and the names of at least three references to: **Endocrine and Reproductive Biology Group, C/O Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545, USA.**



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FOUNDATION FOR
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CHAIRPERSON AND PROFESSOR

DEPARTMENT OF MEDICINE UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE

Applications are invited for the preeminent position of Chairperson and Professor for the Department of Internal Medicine at the University of Cincinnati College of Medicine. This position involves overall responsibility for the development and enhancement of new and ongoing research, teaching and administration. The candidate must have demonstrated outstanding accomplishments in research and teaching or administration in an academic department consistent with a tenured faculty appointment. Please send curriculum vitae and bibliography to:

James J. Nordlund, MD
Chairman Search Committee
University of Cincinnati
College of Medicine
231 Bethesda Ave. (ML 592)
Cincinnati, OH 45267-0592



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Bronchopulmonary Research Senior Scientist

Hoffmann-LaRoche's Bronchopulmonary Program is expanding and requires the expertise of a PhD in Pharmacology Immunopharmacology or Biochemical Pharmacology with post-doctoral experience and a significant publication record.

This individual will supervise a scientific technical staff involved in the identification of novel antiasthmatic agents.

Position requires familiarity with *in vivo* techniques for studying pulmonary function, animal models of hyperreactivity and animal models of allergic disease. Experience with biochemical (RIA, receptor binding, and HPLC) techniques and bioassay techniques used for studying the synthesis, release, and action of allergic mediators such as leukotrienes and PAF is also desirable.

Roche offers a professional environment and an attractive compensation package. Please send resume and publication list to: Position 2AW, c/o Mrs. Eleanor Malone, Professional Employment & Staffing Specialist.



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POSITIONS OPEN

FACULTY POSITION FACULTY OF REHABILITATION MEDICINE UNIVERSITY OF ALBERTA

Applications are invited for full-time, tenure-track appointments in the Department of Physical Therapy and the Department of Occupational Therapy at the University of Alberta, for July 1987. The University of Alberta offers B.Sc. and M.Sc. degrees in physical therapy and occupational therapy. Qualified candidates must possess a doctoral degree. Salary will be commensurate with qualifications at either the assistant professor range of \$31,612 to \$45,340, or the associate professor range of \$39,620 to \$57,236.

Responsibilities include undergraduate and graduate teaching, research and scholarly work, and administrative duties. A strong clinical background would be an asset.

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

Dr. Martha C. Piper
Dean

Faculty of Rehabilitation Medicine
316 Corbett Hall
University of Alberta

Edmonton, Alberta, Canada T6G 2G4

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

The deadline for receipt of applications is 30 January 1987.

DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY University of Alberta

SPEECH-LANGUAGE PATHOLOGIST: A tenure-track position is available 1 July 1987 at the rank of assistant professor. The applicant must hold a Ph.D. degree in speech-language pathology or related discipline and specialize in child language disorders. Specific interest in the language disorders of school age children is preferable. Proven research and university teaching ability is required and certification by the American Speech-Language-Hearing Association is desirable. Salary will be commensurate with qualifications (annual minimum of \$31,612). Deadline for applications is 30 January 1987. *The University of Alberta is an Equal Opportunity Employer but, in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.* Please apply by sending curriculum vitae, names of three referees, and a statement of teaching and research interests to:

Martha Piper, Ph.D.
Dean, Faculty of Rehabilitation Medicine
316 Corbett Hall
University of Alberta
Edmonton, Alberta, Canada T6G 2G4

FLOW CYTOMETRY OPERATOR

Immediate opening for an individual experienced in flow cytometry. The individual would be responsible for a flow cytometry laboratory equipped with dual laser Epics V and Easy 88 system. A background in immunology and/or microbiology is desirable. The position involves approximately 50 percent of time analyzing clinical samples and 50 percent of time on research. The individual should be able to work independently. Send curriculum vitae and three references to: **Gerald Vosika, Biological Therapeutics Inc., 3505 Riverview Circle, Moorhead, MN 56560.**

GROSS ANATOMIST

Department of Surgery, University of California, San Diego (UCSD): Tenure-track assistant professor position open to teach gross anatomy at the UCSD School of Medicine beginning 1 July 1987. This is mainly a teaching and research position, with some administrative responsibilities. It requires interest and ability to teach in the Medical School Core Gross Anatomy course and to offer and participate in elective teaching. The candidate must have a Ph.D. in anatomy and research competence of a degree to allow independent productivity and effective cooperative undertakings with others. Send curriculum vitae and names of three academic references to: **N. A. Halasz, M.D., Professor and Head, Division of Anatomy, UCSD Medical Center, 225 Dickinson Street, San Diego, CA 92103.** Position closes 28 February 1987. Salary per published UC scale. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN PHYSIOLOGY

PHYSIOLOGIST—Applications are invited for a tenure-track, primarily research position in the University of Nebraska, Lincoln (UNL) Department of Veterinary Science. Interested in candidates with a strong record of research accomplishment and an interest in teaching graduate and undergraduate systemic physiology courses. All areas of physiology will be considered, but a molecular or immunological research orientation is preferred to complement an expanding departmental emphasis on these approaches to the study of animal disease. Requires a Ph.D. in physiology or related areas, or D.V.M. (or equivalent degree) with appropriate advanced training. Level of appointment and salary will be commensurate with achievement and experience. Curriculum vitae, three letters of reference, and a summary of research interests should be sent before 15 December to: **Dr. John A. Schmitz, Head, Department of Veterinary Science, University of Nebraska-Lincoln, Lincoln, NE 68583-0905, telephone: 402-472-2952.** *An Affirmative Action/Equal Opportunity Employer.*

INSECT NEUROBIOLOGY FACULTY POSITIONS

The Arizona Research Laboratories, Division of Neurobiology (ARLDN), a new research unit devoted to cellular, molecular, and developmental neurobiology and neuroethology of insects, invites applications for state-funded, tenure-track faculty positions to be filled over the coming 2 to 3 years. These positions will involve research, teaching, supervision of pre- and postdoctoral trainees, and collaboration with other ARLDN scientists on joint projects.

Disciplines and research areas that will receive special attention in this search are: **MOLECULAR NEUROBIOLOGY**—emphasizing molecular analysis of neural function and development in insects with the methods of molecular biology, gene cloning, and hybridoma technology. **NEUROCHEMISTRY**—emphasizing biochemical studies of the structure, metabolism, and function of neurotransmitters and neuropeptides in insects.

Candidates should have a Ph.D. or equivalent degree, at least 3 years of postdoctoral research experience, and a demonstrated dedication to multidisciplinary, collaborative and independent research.

It is anticipated that these positions will be filled at the level of assistant professor, but particularly qualified candidates at more advanced levels are encouraged to apply. These appointments will be effective after 1 July 1987.

Applications should include curriculum vitae, at least three letters of recommendation, and a brief outline of previous research accomplishments and future research plans. Applications received by 1 January 1987 will be reviewed first by the search committee. If a successful candidate is not found, further applications will be reviewed. Please send all materials to: **Dr. John G. Hildebrand, Director, ARL Division of Neurobiology, 603 Gould-Simpson Science Building, University of Arizona, Tucson, AZ 85721.**

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

MOLECULAR NEUROBIOLOGIST

The Department of Biological Sciences invites applications for a tenure-track assistant professorship to begin September 1987. The department seeks an outstanding candidate working in the area of genetic and/or molecular neuroscience. Applications are particularly welcome from individuals with interest in gene expression during neural development, though other areas of molecular neuroscience will be considered. The successful candidate will be expected to establish a vigorous research program and train graduate and undergraduate students. The department has strengths in developmental and behavioral neurobiology, as well as molecular biology, and offers opportunities to participate in campus-wide neuroscience and molecular biology programs. Send curriculum vitae, research plans, and names of three references to: **Dr. Sidney B. Simpson, Jr., Head, Department of Biological Sciences, University of Illinois at Chicago, Box 4348, Chicago, IL 60680.** Closing date, 9 January 1987, or until position is filled. This appointment is contingent upon expected budgetary allocations. *The University of Illinois at Chicago is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

LOGISTICS POLICY ANALYSTS

The Rand Corporation is looking for men and women interested in working on multidisciplinary research teams analyzing challenging problems in military logistics operations and support resource management.

Candidates should have knowledge of some or all of the following:

- Quantitative research methods
- Military supply, repair, transportation and distribution functions
- Command, control, and communications systems
- Joint combat operations
- Combined combat operations
- Logistics or combat models

An advanced degree plus related research experience is required. Rand offers a stimulating research environment plus a competitive salary and benefits program. Send résumé with salary history to: **Kenneth Logan**

The RAND Corporation
1700 Main Street
P.O. Box 2138

Santa Monica, CA 90406-2138

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METEOROLOGICAL RADAR SCIENTIST

Lead meteorological radar investigation which includes in-depth analysis and interpretation of data collected with DRI's K_a-band radar and with radars from NCAR and other institutions. The successful applicant will be expected to develop own program of sponsored research, as well as participate in current and anticipated programs at DRI. Requires Ph.D. in atmospheric sciences or related discipline; experience in collection and use of Doppler radar data in dynamical and physical studies of clouds and precipitation and/or in meso-meteorological studies; and strong skills in use of computers in radar analysis. Desirable qualifications include: experience in polarization diversity techniques and/or dual wavelength techniques; background in field studies and in detailed interpretation and analysis of radar data in conjunction with data from in situ and remote sensors; and related additional theoretical experience. Salary commensurate with qualifications, full benefit package. Applications must be received by 12 December 1986. Send résumé and letter of application to: **Personnel Officer, Desert Research Institute, University of Nevada System, P.O. Box 60220, Reno, NV 89506.** *An Affirmative Action/Equal Opportunity Employer.*

MOLECULAR GENETICIST AND DEVELOPMENTAL BIOLOGIST. Oak Ridge National Laboratory's Biology Division has two openings in its large-scale mouse genetics program for Ph.D. level candidates. Mutant stocks offer opportunities for molecular analyses of gene structure and expression. There is also interest in developing new techniques for detection of induced DNA alterations and in investigations involving germ cells and early embryogenesis. Applicants are expected to develop independent research programs, as well as to collaborate in some ongoing programs. Salary commensurate with experience. Send letter, curriculum vitae, publications list, and names of three references to: **Dr. L. B. Russell, Biology Division, Oak Ridge National Laboratory, P.O. Box Y, Oak Ridge, TN 37831.** ORNL is operated by Martin Marietta Energy Systems, Inc. for the Department of Energy and is an Equal Opportunity Employer.

MOLECULAR IMMUNOLOGIST

The University of Chicago
Ben May Laboratory for Cancer Research

The Ben May Laboratory for Cancer Research of the University of Chicago is seeking applicants for a faculty position with a joint appointment in one of the basic science departments. Candidates should have sufficient research experience to demonstrate both significant accomplishment and outstanding promise. We are committed to developing a strong program in the fundamental aspects of the control of growth and differentiation of lymphocytes. Letters of application including curriculum vitae, bibliography, a brief statement indicating research interests, and the names of three references should be sent to: **Dr. Frank Fitch, Director, Ben May Laboratory for Cancer Research, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637.**

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Geisinger Clinic

RESEARCH SCIENTISTS

Staff Scientist and Senior Staff Scientist positions are available at the Weis Center for Research, a division of the Geisinger Clinic. The new Weis Center Research Building will be completed in March, 1987, and will accommodate 20 separate laboratories. Geisinger is affiliated with the Pennsylvania State University College of Medicine.

Candidates will hold a PhD or MD degree and bring 3 or more years of post-doctoral research experience. Employment should begin by July, 1987. The focus of the Center is cellular and molecular aspects of cardiovascular function and disease. Scientists with experience in molecular and cell biology, including cloning and sequencing, and expression of genes, membrane proteins and receptors, and immunology with an interest in research problems, broadly relevant to the cardiovascular system will be given preferential consideration.

Scientists are provided institutional funding for their salary and a liberal benefits program, and support of post-doctoral fellows, research technicians, supplies and equipment.

Applications will be accepted until the positions are filled. Send a summary of current research, curriculum vitae and a list of professional references to: **Howard E. Morgan, MD, Senior Vice President for Research, Weis Center For Research, (26-00), Geisinger Clinic, Danville, PA 17822. Equal Opportunity Employer M/F/H/V**

Geisinger



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The Pharmacia Corporation is generating a brand new genetic engineering company in La Jolla, CA. We may sound presumptuous, but we know that you know Pharmacia or at least some of its parts. If you give us a call, we can fill you in on some exciting details that you may not have been aware of.

BUT RIGHT NOW, LET US TELL YOU WHAT WE WANT.

We're looking for dedicated, energetic scientists with industrial experience or at least two years of relevant post-doctoral training in the field of molecular genetics:

- You must have hands-on experience, documented by your track record, in solving cloning and expression vector problems.
- You must be a team player.
- You must be willing to invest your time and enthusiasm to get this effort up and flying.

We don't think you'd regret it, either financially or in terms of the quality of life and the scientific environment offered at the site selected in La Jolla. We offer competitive salaries and generous fringe benefits—and the excitement of a start-up!

Please send your resume to Torsten B. Helting, P.O. Box 8827, La Jolla, CA 92038 or call collect to Sweden, Tel. No. 01146-18 163741.

Please provide two independent references for us to contact.
Confidentiality is granted

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POSITIONS OPEN

MOLECULAR GENETICIST/EVOLUTIONIST

The Department of Genetics at the University of California, Davis, invites applications for one tenure-track position at the assistant professor level in the areas of plant molecular genetics, *Drosophila* molecular genetics, or molecular evolution, starting with the 1987 to 1988 academic year. Applicants must have a Ph.D. and postdoctoral training and be using modern molecular techniques to investigate interesting biological problems in one of these three areas. Candidates will be expected to develop an active research program and to participate in graduate and undergraduate teaching and advising. Applicants should submit curriculum vitae, a list and reprints of published works, a statement of professional goals and research interests, and the names of three referees by 1 January, 1987 to: **J. H. Gillespie, Search Committee, Department of Genetics, University of California, Davis, CA 95616.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

NMR SPECTROSCOPIST for research on biological membranes using CPMAS on carbon-labeled cofactors in membrane proteins and wideline deuterium on membrane fatty acids. Well-equipped solids and liquids NMR laboratory with microVAX interfaced spectrometers and advanced graphics. Liquid state experience desirable. Postdoctoral or research associate with salary depending on qualifications. Send curriculum vitae and three confidential letters of recommendation to: **Edward A. Dratz, Professor of Chemistry, Montana State University, Bozeman, MT 59717.**

NEUROBIOLOGISTS

The Department of Biology at University of California, Los Angeles (UCLA) invites applications for two tenure-track positions in neurobiology. The appointment may be made at any rank. The department will emphasize the area of cellular, molecular, and developmental neurobiology and is looking for outstanding candidates with a record of creative and innovative research. Responsibilities include teaching in the undergraduate program.

Please send curriculum vitae, statement of research plans, and reprints of key publications, and arrange for three letters of recommendation to be sent to:

**Neurobiology Search Committee
Department of Biology
University of California, Los Angeles
Los Angeles, CA 90024**

The University of California is an Affirmative Action/Equal Opportunity Employer. We encourage applications from individuals of minority backgrounds and from women.

Closing date for applications is 15 December 1986.

ORGANIC CHEMIST

The Fargo Veterans Administration Research Service is seeking an organic chemist. Major problems involve the purification of natural products and the synthesis of new drug derivatives and drug-protein conjugates. Candidates must have either completed all requirements for a Ph.D. or a bachelor's degree, plus 2 1/2 years of experience in the above areas. Candidates should be able to work independently and are expected to write research proposals. Position is temporary, not to exceed one year, with possibility of extension. If interested, telephone **The Personnel Service at 701-232-3241, extension 262 or write VA Medical Center (05), 21st Avenue and Elm Street North, Fargo, ND 58102, not later than 7 November 1986.** *An Equal Opportunity Employer.*

PLANT PHYSIOLOGICAL ECOLOGY UNIVERSITY OF GEORGIA

The Botany Department invites applications and nominations for a tenure-track faculty position beginning September 1987. Appointee will conduct independent research in physiological ecology and assist in teaching physiological ecology and plant physiology. A record of publication and grant support is required. Rank and salary will be commensurate with experience. Applicants should arrange to have a statement of research goals, curriculum vitae including a list of grant support, publications, and four letters of reference sent to: **Dr. B. Haines, Box 3520, Botany Department, University of Georgia, Athens, GA 30602, by 1 December 1986.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Trinity College (CT) Department of Chemistry invites applications for a position in **ORGANIC CHEMISTRY** to begin 1 September 1987. Candidates should have the Ph.D. and be prepared to teach courses in elementary and advanced organic chemistry, and introductory chemistry. Research with undergraduate student participation is expected. Other duties will include student advising and participation on college committees. The Chemistry Department is certified by The American Chemical Society and offers majors in chemistry and biochemistry. The position pending approval of the college will be tenure-track and carry the rank of assistant professor. *Applications from members of groups affected by Affirmative Action guidelines are invited.* Submit résumé, at least three letters of recommendation, transcripts from postsecondary institutions, and a statement of teaching and research objectives to: **Professor Ralph O. Moyer, Jr., Chairman, Department of Chemistry, Trinity College, Hartford, CT 06106, no later than 1 February 1987.** *Affirmative Action/Equal Opportunity institution.*

Immediate opening for **Ph.D. WITH BACKGROUND IN BIOCHEMISTRY AND/OR MOLECULAR BIOLOGY** to work on projects using a human malaria parasite. Projects include identification and characterization of parasite antigens for vaccine development and studies of parasite drug-resistant and developmental mutants. Please send résumé and three references to: **Dr. Joseph Inselburg, Department of Microbiology, Dartmouth Medical School, Hanover, NH 03756.**

PHYSIOLOGICAL PSYCHOLOGIST: The Department of Psychology at the University of Southern California announces a tenure-track faculty position for fall 1987 at the assistant/associate professor level for a physiological psychologist doing basic animal research in behavioral endocrinology, with a focus on aging. Interest and/or work in hormonal substrates of learning and memory is also desirable. Candidates must have an established record of research publications and research grant support and must have had significant experience teaching in a university psychology department. Please send letter of interest, curriculum vitae, re/preprints, and arrange for three letters to be sent to: **Physiological Search Committee, Department of Psychology/SGM 501, University of Southern California, Los Angeles, CA 90089-1061.** Deadline for receipt of all materials is 20 December 1986. *The University of Southern California is an Equal Opportunity/Affirmative Action Employer.*

PLANT BIOLOGY

Over the next 5 years, the Department of Biology at the University of Utah anticipates filling several faculty positions in the plant sciences in areas of biochemistry, development, physiology, and genetics. At present, we seek two candidates for regular, tenure-track appointments in these subdisciplines (rank open). The successful candidates will be expected to establish active research programs and to participate in undergraduate and graduate teaching. Our preference at this time is in the areas of plant physiology and plant development; however, the areas of specialization are less important than overall evidence of excellence and outstanding potential. We do hope to appoint two colleagues who can establish productive interactions with existing programs in molecular biology, genetics, and ecology.

Address applications or nominations to:

**Dr. James Ehleringer, Chairman
Search Committee
Department of Biology
University of Utah
Salt Lake City, UT 84112**

Please send résumé, copies of recent publications, and three letters of reference. The deadline for applications is 15 November 1986.

The University of Utah is an Equal Opportunity/Affirmative Action Employer. These positions are subject to final budgetary approval.

POSTDOCTORAL ASSOCIATE POSITION, available 1 November to study the molecular basis of control governing the rate of initiation of DNA replication in bacteria. [See *Cell* 46, 763 (1986)] for examples of approaches used in this study. Send curriculum vitae and references to: **Dr. J. W. Zyskind, Department of Biology, San Diego State University, San Diego, CA 92182.**

POSITIONS OPEN

PLANT MORPHOLOGY AND DEVELOPMENT UNIVERSITY OF GEORGIA

The Botany Department of the University of Georgia is accepting applications for a faculty position in the area of plant morphology and development. The position is at the assistant professor level, but a more senior appointment commensurate with experience is possible. The successful candidate will be expected to maintain an active research program and teach undergraduate courses in plant anatomy and morphology, as well as advanced subjects of the candidate's choice. Although all research areas will be considered, we encourage applications from those using cellular or molecular tools to answer fundamental questions in plant biology. Applicants should submit curriculum vitae, statement of research interests, and arrange to have three letters of recommendation sent by 15 December 1986 to: **Dr. Barry A. Palevitz, Search Chairman, Botany Department, University of Georgia, Athens, GA 30602.** *An Affirmative Action/Equal Opportunity Employer.*

PLANT PHYSIOLOGIST

The Department of Biology of Reed College has an opening in August 1987 for a full-time **ASSISTANT PROFESSOR** to teach plant physiology in an introductory and an upperclass course. A Ph.D. is required. It is expected that the successful candidate will demonstrate a high potential for excellence in teaching undergraduates and will develop a competitive research program which involves the guidance of undergraduate research. Released-time from teaching for this purpose will be available initially. Reed College is a highly selective undergraduate institution with a strong, traditional commitment to scholarship.

Applicants should send their curriculum vitae and arrange to have three letters of reference to:

**Laurens N. Ruben, Chair
Biology Search Committee
Reed College
3203 S.E. Woodstock Boulevard
Portland, OR 97202**

The closing date for applications will be 15 January 1987. *Reed College is an Equal Opportunity Employer.*

POSTDOCTORAL ASSOCIATE—A position beginning July 1987 is available to study activation and regulation of cellular genes by oncogenes in epithelial cells. Preference given to those with a strong background in molecular biology. Send curriculum vitae and bibliography to: **Michael W. Lieberman, Department of Pathology, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *Equal Opportunity Employer M/F.*

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

Position available for 2 years to study the effects of state-of-the-art lasers on neural tissue. Studies will examine effect of pulsed lasers on synaptic transmission in a variety of neural systems.

Candidates should have training in bioengineering, biophysics, or cellular neurophysiology. Send résumé and names of three referees to:

**Dr. W. Z. Rymer
Department of Physiology
Ward 5-295
303 East Chicago Avenue
Chicago, IL 60611**

Northwestern University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to study the molecular basis of specific recognition in plant/microbe interactions. Experience in plant or bacterial molecular biology essential. Studies will focus on the expression of cloned genes in incompatible interactions and early molecular events conditioned by single plant resistance genes. Competitive salary. Send statement of research interests, résumé, and names of three references to: **Dr. Dean W. Gabriel, Plant Pathology Department, University of Florida, Gainesville, FL 32611.**

FACULTY POSITIONS IN MALE REPRODUCTIVE BIOLOGY

The Worcester Foundation for Experimental Biology invites applications for one or more junior or senior level faculty positions in the area of male reproductive biology. We are particularly interested in highly talented scientists using molecular or cellular approaches to study testicular function, sperm development, or sperm-egg interaction.

The Worcester Foundation is a private, nonprofit biomedical research institute located on an attractive wooded 100 acre campus only a few minutes from the University of Massachusetts Medical Center and in close proximity to all major New England academic and research institutions. The Foundation offers excellent facilities, competitive salaries, liberal institutional start-up funds, a stimulating atmosphere, and the opportunity to carry out research unencumbered by teaching and administrative duties. Applicants should send their curriculum vitae, names of references and a synopsis of current and planned research to **Dr. George Witman, C/O MRB, Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545. USA.**



**WORCESTER
FOUNDATION FOR
EXPERIMENTAL
BIOLOGY**

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

MOLECULAR VIROLOGIST

The Sterling Research Group, a division of Sterling Drug Inc., announces an opening at its Research Institute in Rensselaer, NY for a Senior Research Biologist in its Microbiology Department.

The successful candidate will possess a PhD degree in Virology or molecular biology with 2-5 years relevant postdoctoral experience. The scientist will be expected to apply current recombinant DNA technologies to the discovery of novel chemotherapeutic agents. Supervision of other scientific staff is expected and strong interpersonal and communication skills are required.

Located near Albany, NY, we offer an attractive salary and benefits package as well as opportunities for professional development in a dynamic environment utilizing a team approach to Research and Development. Interested candidates should send curriculum vitae including salary requirements in confidence to:

**Ms. Randy E. Goldfischer
Employee Relations Administrator**



**STERLING-WINTHROP
RESEARCH INSTITUTE**

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

Section Head Microbiology Laboratory

(UH #1092)

Required: Ph.D. (or academic equivalent) in Microbiology with special training or experience in Virology. Educational requirements are commensurate with that deemed necessary to function as Head of Microbiology Laboratory. Preferred: Membership/certification by ASCP, ASMT, etc.

Send resumes indicating the UH # to: Department of Human Resources, University Hospital, Health Sciences Center, SUNY Stony Brook, Stony Brook, New York 11794-8300.

SUNY Stony Brook is an affirmative action/equal opportunity educator and employer.



UNIVERSITY HOSPITAL
Health Sciences Center
State University of New York
Stony Brook

MOLECULAR BIOLOGIST

The Molecular Biology Research group at Upjohn has an opening for a molecular biologist to study gene expression in mammalian cells. Molecular Biology Research is part of Upjohn's growing Biotechnology program, which has as its goals: (1) to bring state-of-the-art research in new areas of molecular and cellular biology to Upjohn, and (2) the integration of these new technologies into research programs throughout Upjohn. As part of this group, the successful applicant for this position will be expected to implement a research program on some aspect of gene expression in mammalian cells. There will also be the opportunity to participate in collaborative studies with scientists involved in drug discovery research, as well as with other scientists in the Biotechnology group.

This position requires a Ph.D. with postdoctoral experience that includes significant research accomplishments. Candidates with research interest in any aspect of the molecular biology of mammalian cells are encouraged to apply. Appointment at any level of the Scientist career path is possible for this position, so applications from individuals with established scientific reputation are welcome.

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 19338-F when calling.

Upjohn



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POSITIONS OPEN

POSTDOCTORAL FELLOW

To join investigations of structure and regulation of expression of neurotrophic genes (NGF) with focus on cis and trans regulatory elements and factors. Access to microchemical core facility (oligonucleotide and peptide synthesis and analysis).

Position available immediately. Submit curriculum vitae and three references to: **Gerhard Heinrich, M.D., Wellman 3, Massachusetts General Hospital, Boston, MA 02114.**

POSTDOCTORAL FELLOW POSITION open in January 1987 for recent Ph.D. in psychology, ecology, or physiology; NICHD training program in vertebrate reproductive biology. Apply to: **F. H. Bronson or D. E. Crews, Zoology Department, University of Texas, Austin, TX 78712.**

POSTDOCTORAL POSITION. Available immediately to utilize molecular and cellular biology of *Saccharomyces cerevisiae*, recombinant DNA technology, and other genetic approaches in one or more of several studies, including gene cloning and sequencing, characterization of yeast mutations conferring altered resistance to bleomycin killing, internucleosomal cleavage of chromatin, and uptake and localization of radiolabeled bleomycin. Salary range: \$20,328 to \$24,728. Please send curriculum vitae and names of three references by 21 November to: **C. W. Moore, Ph.D., City University of New York (CUNY) Medical School, Microbiology, Marshak Science Building, J 910, THE CITY COLLEGE OF CUNY, Convent Avenue at 138 Street, New York, NY 10031. An Affirmative Action/Equal Opportunity Employer, M/F.**

POSTDOCTORAL POSITION available immediately for an individual with training in immunology/immunochimistry. The position requires laboratory experience in the production of monoclonal antibodies, isolation and purification of antibodies, and in RIA techniques. Send résumé and list of three references to: **Michael Mayersohn, Ph.D., College of Pharmacy, University of Arizona, Tucson, AZ 85721. Affirmative Action/Equal Opportunity Employer.** Closing date for applications is 24 November 1986.

POSTDOCTORAL POSITION available immediately for 2-year study to characterize neurotransmitter mechanisms operating at skeletal nerve-muscle junctions of larval insects. Emphasis is on development of identified neuron paradigms using HPLC, immunological and electrophysiological techniques to measure localization, and release and receptor actions of endogenous transmitters. Submit curriculum vitae and have three letters of reference sent to: **Dr. M. E. Adams, Division of Toxicology and Physiology, University of California, Riverside, CA 92521. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS (three) available immediately to engage in projects on G-protein-mediated transmembrane signaling (**Dr. Ifeanyi J. Arinze**), roles of glycoconjugates in hormone-receptor and cell-substratum interactions (**Dr. Diane A. Blake**), and application of fluorescence spectroscopy and/or high pressure biochemistry to receptor-mediated signal transduction (**Dr. Parkson Chong**). Salary up to \$18,000. Our laboratories are contiguous and successful applicants will be expected to interact in related projects from these laboratories. Applicants should send curriculum vitae, statement of research experience, and names of three persons who may be contacted for reference to: **Dr. Ifeanyi J. Arinze, Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208.**

POSTDOCTORAL POSITION IN HUMAN MOLECULAR GENETICS available immediately for molecular investigation of human lysosomal gene structure and expression. Recent Ph.D. in biochemistry or related field and experience in molecular biology and DNA sequencing required. Send curriculum vitae, bibliography, research interests, and names of three references to: **Dr. Gregory A. Grabowski, Division of Medical Genetics, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, NY 10029. An Equal Opportunity Employer.**

POSITIONS OPEN

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

POSTDOCTORAL POSITION—Northern Regional Research Center, Peoria, IL. ARS is seeking an individual to develop a transformation system and molecular cloning in the filamentous fungi, *Fusarium sporotrichoides* and *Gibberella pulicaris*, involved in the biosynthesis of trichothecenes. Candidates must have research experience in molecular biology and recombinant DNA techniques. Applicant will join a multidisciplinary team (biochemist, microbiologist, molecular geneticist, and natural products chemist) studying the biosynthetic pathway for the formation of trichothecenes, toxic sesquiterpenes. A Ph.D. is desired. U.S. citizenship is required. The position is GS-11 (\$26,381). Additional information may be obtained by calling **Dr. Shotwell at 309-685-4011, extension 265.** Applications in response to this advertisement must be marked 6N017. Send résumé to: **O. L. Shotwell, Northern Regional Research Center, 1815 North University, Peoria, IL 61604 by 30 November 1986.**

Equal Opportunity Employer

POSTDOCTORAL POSITION. Position available February 1987 to study Shiga-like toxin (SLT) production by *Escherichia coli*. The project will involve the development of monoclonal antibodies, as well as the construction and use of gene probes to study molecular aspects of SLT production. Background in bacterial pathogenesis with experience in DNA technology preferred. Submit curriculum vitae and names of three references to: **Dr. Alison D. O'Brien, Department of Microbiology, c/o Civilian Personnel Division, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** Curriculum vitae will not be returned. *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION AVAILABLE. A postdoctoral position is available immediately at the **Oak Ridge National Laboratory** to join well-established interdisciplinary group of biologists and physicists studying basic mechanisms of the action of ionizing radiation on DNA. Work will include irradiation of oligonucleotides in aqueous solution, analysis of fragmentation products, and correlation of results with predictions calculated with Monte Carlo computer simulation model. Appointment is for 2 years. Other well-qualified persons would also be considered for a temporary appointment. Salary dependent on qualifications. Interested individuals are invited to write for information to: **Training Office, University of Tennessee—Oak Ridge Graduate School of Biomedical Sciences, Biology Division, P.O. Box Y, Oak Ridge National Laboratory, Oak Ridge, TN 37831, or contact J. E. Turner, telephone: 615-574-6217, or R. J. M. Fry, telephone: 615-574-1252. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately for NIH-funded project on the central neural control of gastric motility and acid secretion. Prior neurophysiological experience is mandatory. Salary range: \$17,000 to \$20,000, depending upon experience.

Send curriculum vitae and three references to: **Dr. Richard C. Rogers, Department of Physiology, The Ohio State University, College of Medicine, 333 West 10 Avenue, Columbus, OH 43210.** Deadline is 7 November 1986.

An Equal Opportunity Employer

POSTDOCTORAL POSITIONS AVAILABLE

To study nasal chemical senses using electrophysiological, behavioral, and modern neuroanatomical techniques. Candidates should have training in electrophysiology or in assessing reptilian behavior. Send curriculum vitae and three letters of reference to: **Dr. Mimi Halpern, Department of Anatomy and Cell Biology, Box 5, State University of New York (SUNY) Health Science Center at Brooklyn, Brooklyn, NY 11203.**

Equal Opportunity Employer. DMC number C-0026.

POSITIONS OPEN

POSTDOCTORAL POSITION, YALE UNIVERSITY MOLECULAR BIOLOGY OF SODIUM TRANSPORT. Funded positions available for individuals with background in molecular biology, membrane transport, or physiology, to join multidisciplinary group studying of the molecular basis of sodium transport using recombinant DNA methods, including recently cloned genes for Na,K-ATPase subunits. *Yale University is an Equal Opportunity Employer.* Contact: **Dr. E. J. Benz, Jr., or Dr. Joseph Hoffman, Department of Medicine, 802 LCI, P.O. Box 3333, New Haven, CT 06510. Telephone: 203-785-4153.**

POSTDOCTORAL POSITIONS

Openings available now, or during the coming year for individuals with experience in cell biology and/or protein chemistry to collaborate in studies of the mechanisms and regulation of protein breakdown in eukaryotic cells, especially skeletal muscle, or in bacteria. Research focuses on the selectivity and functions of the cytosolic ATP-dependent proteolytic pathway. Salary depends on experience. Send application, curriculum vitae, and references: **Professor Alfred Goldberg, Department of Physiology and Biophysics, Harvard Medical School, Boston, MA 02115.**

POSTDOCTORAL POSITIONS IN ECOLOGICAL MICROBIAL GENETICS

Survival, genetic stability, and effects on microbe-mediated ecologic processes of recombinant bacteria in soil. Experience in molecular biology and microbial ecology, preferably in soil, essential. Appointments for 2 years, \$21,000 starting, in New York City or Corvallis, OR. Send curriculum vitae, three references, and location preference by 1 December 1986 to: **G. Stotzky, Biology, New York University, New York, NY 10003.**

POSTDOCTORAL POSITIONS

Two positions are available immediately to study the biosynthesis, physiological disposition, and bioactivation of amino acid S-conjugates. Applicants with a Ph.D. in biochemistry, pharmacology, or medicinal chemistry and with experience in biochemical toxicology are sought. Candidates should send curriculum vitae, a brief statement of research experience, and the names of three references to: **Dr. M. W. Anders, Department of Pharmacology, University of Rochester, 601 Elmwood Avenue, Rochester, NY 14642. Equal Opportunity Employer, M/F.**

POSTDOCTORAL POSITIONS (two) available as of January 1987, to study the role of growth factors in the control of proliferation of normal and neoplastic hepatocytes in culture. Techniques to be utilized include cell culture, protein chemistry, monoclonal antibodies, and recombinant DNA technology. Experience in some of these areas is desirable. Please send curriculum vitae and three letters of recommendation to: **Dr. George Michalopoulos, Associate Professor, P.O. Box 3432, Duke University Medical Center, Durham, NC 27710. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN CEREBRAL BLOOD FLOW REGULATION available immediately for 2 years. NIH-funded project with competitive salary. Research will involve studying a novel aspect of normal cerebral blood flow regulation and its application to cerebral ischemia. Techniques for cerebral blood flow include quantitative double label autoradiography and micro-thermal conductivity. Send curriculum vitae, a summary of research interests, and three references to: **Dr. S. C. Jones, Department of Brain and Vascular Research, FF2-31, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44106-4775.**

POSTDOCTORAL POSITION—MOLECULAR ENDOCRINOLOGY. A 2-year position is available immediately to study the effect of steroid hormones on RNA stability. Skill in recombinant DNA techniques is desirable. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Daniel R. Schoenberg, c/o Civilian Personnel, Department of Pharmacology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.**

SCIENTIFIC EXCHANGES

NAS Scientific Exchange Program with the U.S.S.R. and Eastern Europe

The National Academy of Sciences (NAS) invites applications from American scientists who wish to make visits beginning during the period September 1, 1987 through December 31, 1988 to the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Long-term research visits of 3 to 12 months duration are encouraged, particularly if contact with colleagues in the other country has already been established. The minimum length of visits is 1 month in one country.

Applicants must be U.S. citizens and have a doctoral degree or its equivalent by June 1987 in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; environmental sciences; engineering; archaeology and anthropology; geography; or psychology. Also included are science and technology policy studies and other aspects of the economic and social sciences that involve quantitative analysis. Other scientific disciplines not explicitly mentioned will be considered on a case-by-case basis. Necessary expenses will be met by the NAS and the foreign academy, including reimbursement for long-term visitors for salary lost up to a predetermined maximum and expenses for accompanying family members for visits exceeding 5 months.

Requests for applications should reach the National Academy of Sciences not later than February 13, 1987. Applications must be postmarked by February 28, 1987. Address application requests to:

National Academy of Sciences
Office of International Affairs
Soviet and East European Affairs (JH-218)
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone: (202) 334-2644

DEVELOPMENTAL BIOCHEMIST

The Upjohn Company, a research-oriented pharmaceutical company, has an opportunity for a motivated scientist to conduct innovative discovery experimentation in skeletal muscle growth as affected by growth hormone, insulin-like growth factors, and related growth factors. The successful candidate is expected to conduct experimentation into the interrelationships between receptor occupancy, second messenger production, and the regulation of gene expression for muscle cell proteins, especially myofibrillar proteins. This experimentation will be a component of a discovery program directed toward understanding the regulatory processes associated with growth and differentiation of muscle and adipose tissues. Primary interactions will be with investigators working in the areas of endocrinology, cell biology, lipid metabolism, peptide chemistry and growth physiology.

Minimum qualifications include a Ph.D. and two years of related professional or post-doctoral experience in biochemistry, cell biology or muscle biology. Demonstrated abilities in receptor biochemistry, second messengers, or molecular biology are required. An understanding of muscle cell metabolism and tissue culture techniques is 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 18022-F when calling.



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PROTEIN CHEMISTS

At Cetus Corporation, we are committed to maintaining a leading role in the research and development of biotechnology-based therapeutics.

We currently seek Associate Scientists and Research Associates who will participate in the study of proteins of potential therapeutic value within our Protein Chemistry group. Opportunities are available in the following areas:

PROTEIN/ENZYME PURIFICATION AND CHARACTERIZATION

Positions are available at several levels of experience for purification and characterization of native proteins from mammalian cell supernatants, recombinant proteins from eukaryotic and prokaryotic sources, bacterial enzymes, or immunotoxins. A Ph.D. or BS/MS plus extensive experience in protein/enzyme isolation at the Micro or Macro level are required. HPLC, gel electrophoresis and column chromatography experience is essential. A general knowledge of cell biology, molecular biology and immunology/immunochemistry is desirable.

PROTEIN STRUCTURAL ANALYSIS

We seek an individual skilled in techniques of structural analysis of proteins to carry out laboratory operations, maintenance and data handling in a laboratory equipped with AB1470 and Beckman 890c sequencers, and Beckman 121MB/6300 amino acid analyzers. Requires a Ph.D. or BS/MS with extensive experience and demonstrated expertise in amino acid analysis and sequence determination. An interest in methods development in microanalysis, isolation and computerized data handling is also required.

Please send your resume in confidence to:

CETUS CORPORATION
Box KKS
1400 Fifty-third Street
Emeryville, CA 94608
E/O/E



DIRECTOR REPRODUCTIVE TOXICOLOGY

Continued expansion of the Pathology and Experimental Toxicology Department of Warner-Lambert/Parke-Davis has created a director-level opportunity in the Reproductive Toxicology Section. The Pathology and Experimental Toxicology Department is housed in a new 100,000 square foot laboratory in Ann Arbor, adjacent to the University of Michigan campus.

In this newly created position, the director will be responsible for the development and direction of an expanding section. Duties will include the planning and reporting of all teratology, reproduction and neonatal toxicity studies of new pharmaceutical products; communication with regulatory agencies and participation in department and division management activities.

Qualifications for this position include a DVM or Ph.D. degree in Toxicology, Teratology, Reproductive Biology, or related field. Board Certification in Toxicology is desirable. Additional qualifications include a thorough knowledge of all aspects of reproductive toxicity assessment, with five to ten years of industrial experience and a demonstrated record of successful research and management experience. Excellent oral and written communications skills are essential.

We invite qualified applicants to consider this challenging opportunity to join a dynamic organization with excellent compensation, benefits, and working and living environment. Send resume, with salary requirements before November 7, 1986, in confidence to:

Ms. M. Wolin
Warner-Lambert/Parke-Davis
2800 Plymouth Road
Ann Arbor, MI 48105

**WARNER
LAMBERT**

EQUAL OPPORTUNITY IN ACTION

An *Uncommon* Opportunity

PHARMACOLOGIST

The continued growth and expansion of Marion Laboratories, Inc. has created openings in our Cardiovascular Pharmacology Department within Research and Development for experienced Pharmacologists. These positions will be located at our Marion Park facility in Kansas City, Missouri.

Primary responsibilities will include evaluating the pre-clinical efficacy and mechanism of action of cardiovascular pharmaceuticals. The successful candidates should have a Ph.D. in pharmacology, physiology or related biological science with at least 2 years of postdoctoral experience in pharmacology. A good background in cardiovascular pharmacology/physiology is required. Prior experience in isolated tissue and whole animal preparations is beneficial. Good oral and written communication skills are essential.

We offer an excellent total compensation and benefits package including bonus, stock options, profit sharing, comprehensive group health, dental and life insurance. Please send a complete resume including salary history in confidence to: **Marion Laboratories, Inc., Recruiting & Placement, Dept. CTM, P.O. Box 9627, Kansas City, MO 64134.** Equal Opportunity Employer.

**Marion
Laboratories, Inc.**

The *Uncommon* Company

MAMMALIAN ECOLOGISTS

Will help reduce data sets and prepare reports and articles concerning the ecology of San Joaquin kit foxes inhabiting petroleum fields in Kern County, California. Limited field work. Minimum requirements include a BS emphasizing vertebrate ecology, and senior authorship on at least three major scientific reports or articles dealing with subjects such as mammalian ecology, animal population dynamics, wildlife conservation or management. Preference given to candidates with: advanced degrees; working knowledge or appropriate scientific literature; statistical, computer modelling, synthesis, and writing skills needed for timely reporting of mammalian populations data; familiarity with Digital VAX; familiarity with SYSTAT or SAS. 5-7 positions available.

HABITAT RECLAMATION SPECIALIST

Will perform all tasks, including most of the field work, necessary to design, implement, and monitor a large, applied reclamation program in arid petroleum fields of southcentral California. Will gather, synthesize, and publish results of project in reports and articles in a timely way. Minimum requirements include: BS in botanical speciality directly related to habitats; senior authorship on at least three reclamation strategies or applied restoration. Preference given to candidates with: advanced degrees; experience or training in western U. S.; knowledge of sources of supplies and services for reclamation projects and experience with subcontracting or purchasing them; knowledge of appropriate federal requirements; excellent oral and written communication skills.

Duty station for positions is Bakersfield, California. Openings contingent upon approval of Federal funding.

Qualified candidates send resume including addresses of references, complete publication list, and statement of availability to:



EG&G Energy Measurements, Inc.
Attention: Technical Recruiting
130 Robin Hill Road
Goleta, California 93117

U. S. Citizenship Required
An Equal Opportunity Employer

Ph.D. Ocular Pharmacology

Merck Sharp & Dohme Research Laboratories has recently committed to an expansive research effort in the field of Ocular Pharmacology.

We are seeking an experienced Scientist who will have responsibility for directing ongoing studies to elucidate the disposition and pharmacokinetics of ocular drugs.

This position requires a broadly trained Ph.D. in Pharmacology, Biochemistry, Chemistry or the equivalent with a minimum of 2 years postdoctoral training. Background and training should include significant experience in analytical techniques including (but not limited to) HPLC, GLC, and radiochemical analysis. A significant publication record and an ability to work both independently as well as in a group research environment is also required. Interest in the evaluation and development of ocular delivery systems would be advantageous.

Excellent salary and benefit programs accompany this position at our modern and spacious research laboratories located in suburban Philadelphia, PA. Please submit your resume in complete confidence to:

Assistant Personnel Manager

MERCK SHARP & DOHME RESEARCH LABORATORIES

West Point, PA 19486

EEO/AA/VH/EMPLOYER



MERCK & CO., INC.

We Said NO. So You Could Say YES!

IGEN, INC. turned down a major pharmaceutical firm's offer to purchase us because we believe IGEN can become one of the major diagnostics and pharmaceuticals companies of the future. If you are a Ph.D. with at least 5 years experience in management and assay development you are a candidate to direct our Immunoassay Laboratory.

DIRECTOR OF IMMUNOASSAY RESEARCH

The successful professional will have excellent written, verbal and interpersonal skills and will have had experience in the development of ELISA and RIA methods.

Further responsibilities will include the development of non-isotopic immunoassay techniques and reagents, new product development and working closely with Research to insure project coordination.

If you are qualified for the challenge and ready to help reshape the industry with an energetic organization while earning a salary commensurate with your experience and expertise, this is the position for you.

IGEN, INC. welcomes discussions of these opportunities with curious qualified candidates who may not be currently exploring employment alternatives. **Call in confidence to our Director of Human Resources at (301) 984-7964, or send your resume with salary history in confidence to: IGEN, INC., Department SM-1017A, 1530 East Jefferson Street, Rockville, Maryland 20852.**

IGEN, INC.

*An Emerging
Leader in
Biotechnology*

An Equal Opportunity Employer

BIOPROCESS MICROBIOLOGY

The Upjohn Company, a worldwide leader in the research, marketing and production of pharmaceuticals, chemicals, and agricultural products, has openings at the B.S. and M.S. levels in its Bioprocess Research and Development Unit located in Kalamazoo, Michigan. Candidates should have training and laboratory experience in microbiology, microbial physiology, biochemistry, genetics and/or molecular biology. These positions are responsible for supporting the development of new and improved processes or cultures for producing commercially important antibiotics, steroids, or proteins. These are Research Associate positions and involve participation in design, execution, and interpretation of experiments.

Microbiologist/Microbial Physiologist/Biochemist (B.S., M.S.)

Investigate the biochemistry and physiology of the production of fermentation products including antibiotics, steroids, and proteins produced by genetically and non-genetically engineered microorganisms. The position involves laboratory, pilot plant, and commercial scale process development using computer controlled equipment and contemporary fermentation technology. This Research Associate position requires training and experience in microbiology, biochemistry, microbial physiology, or molecular biology.

Microbiologist (B.S., M.S.)

Investigate the microbiology of antibiotic production by classical and contemporary techniques with the goal of developing cultures for use in commercial fermentations. This Research Associate position requires training and experience in microbiology, genetics, or molecular biology.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary, commensurate with experience, a comprehensive benefits program and relocation assistance.

For confidential consideration, please call from outside Michigan 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 immediately. Please refer to ad number 1807-A when calling.



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An Equal Employment Opportunity Employer M/F

POSITIONS OPEN

POSTDOCTORAL POSITIONS available in projects involving: (i) the hormonal control of eukaryotic gene expression, and (ii) the molecular basis for cardiovascular and hypertensive diseases. Knowledge of recombinant DNA techniques an asset. Contact: **Dr. David T. Kurtz**, Department of Pharmacology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425.

POSTDOCTORAL RESEARCH ASSOCIATE wanted for studies of nicotinic acetylcholine receptors from neurons, muscles, and electric organs. Experience with molecular genetic techniques and evidence of research productivity desired. Send curriculum vitae and three letters of reference to: **Dr. Jon Lindstrom**, The Salk Institute, P.O. Box 85800, San Diego, CA 92138.

POSTDOCTORAL RESEARCH ASSOCIATE, polymer chemistry. Position available immediately. Will be responsible for synthesis and characterization of novel expanding monomers, carry out polymerization of said monomers. Requires Ph.D. in organic/polymer chemistry; postdoctoral experience in the field of expanding polymers desirable. Qualified candidate will have a broad range of research training and experience in chemistry, including publications in major journals. Salary: \$16,500. Mail résumé to: **Department of Employment and Training**, Job Order #6014608, 1123 Eutaw Street, Room 201-B, Baltimore, MD 21201.

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available 1 December 1986 to participate in NIH-funded research, pursuing studies on heart development in cardiac mutant salamanders using techniques in recombinant DNA and molecular biology. Submit curriculum vitae, reprints, and have three letters of reference sent to: **Dr. Larry F. Lemanski**, Chairman, Department of Anatomy and Cell Biology, State University of New York (SUNY) Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL SCIENTISTS. Three positions now available. First requires a Ph.D. in immunochimistry or virology with background in idiotype networks and immunoregulation to participate in research in anti-idiotypes and AIDS under direction of **Dr. Ronald Kennedy**. The second position requires a Ph.D. in immunology and experience in cellular aspects of synthetic peptides or vaccines to study synthetic peptides and hepatitis B virus under direction of **Dr. Gordon Dreesman**. The third position is for an immunopharmacologist who will conduct research with **Dr. Tran Chanh**. Ph.D. experienced in immunology of toxins is desired, but persons with a Ph.D. in pharmacology without immunology experience will be considered. Please mail curriculum vitae with names of three references to: **Personnel Manager**, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, TX 78284. Equal Opportunity Employer, M/F.

PROFESSOR AND HEAD DEPARTMENT OF MICROBIOLOGY THE UNIVERSITY OF TENNESSEE KNOXVILLE, TENNESSEE

QUALIFICATIONS: Doctoral degree in microbiology, or closely allied biological science; demonstrated productivity in microbiological research and excellence in teaching; administrative experience or evidence of administrative ability. **RESPONSIBILITIES:** To provide leadership in teaching, research, and administration in a department which serves both the College of Liberal Arts and the College of Veterinary Medicine. **STARTING DATE:** 1 September 1987. **APPLICATIONS:** Applicants should submit a letter of interest accompanied by a curriculum vitae, a description of the applicant's research program, and career objectives, and the names and addresses, and telephone numbers of five individuals who can evaluate the applicant's qualifications for the position. All materials should be sent to: **Dr. Dewey Bunting**, Chairman, Search Committee, Department of Microbiology, University of Tennessee, Knoxville, TN 37996-0845. **CLOSING DATE:** 1 January 1987. The University of Tennessee is an Affirmative Action/Equal Opportunity Institution.

POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION available immediately for ongoing projects studying the therapeutic potential of porphyrins and related macrocycles for tumor photodynamics therapy. Ph.D. in biochemistry or pharmacology preferred, with cell biology background. Familiarity with HPLC, TLC, and so forth needed. Send résumé with description of research experience and/or reprints, and three letters of recommendation to: **Dr. M. K. Birnbaum**, Research Department, St. Vincent Medical Center, 2213 Cherry Street, Toledo, OH 43608, or telephone: 419-321-2962. St. Vincent Medical Center is an affiliated teaching hospital of the Medical College of Ohio. Equal Opportunity Employer.

PROTEIN CHEMIST

An opportunity is available for a biochemist with experience in protein structure studies. Candidate must have a doctoral degree in biochemistry and a minimum of 5 years of experience in the field of protein chemistry. Must be accomplished in the preparation of proteins and peptides by modern HPLC methods and the analysis of their composition and primary sequence. Must be experienced in the use of gas phase sequencer. Must be experienced in the use of computers to predict structure. Position is located in the Division of Medical Genetics, Department of Pediatrics, University of Southern California at Childrens Hospital of Los Angeles. Joint appointment in biochemistry is available. Excellent opportunities are available for collaboration and extension of interests to challenging cell biologic questions of protein translocation and membrane integration. Salary, academic rank, and tenure status are determined by experience and record of productivity. Send curriculum vitae, representative publications, statement of research interests, and names of three references to: **John A. Barranger, M.D., Ph.D.**, Head, Division of Human Genetics, Childrens Hospital of Los Angeles, 4650 Sunset Boulevard, Los Angeles, CA 90027.

Childrens Hospital of Los Angeles and the University of Southern California are Affirmative Action Employers.

RESEARCH ASSOCIATE MOLECULAR BIOLOGY

An industry leader in advanced biotechnology, **Amgen** develops products in the human health care area. We have an immediate opportunity for a Research Associate to provide support in our Molecular Biology Department.

The qualified candidate should have a BS/MS in Molecular Biology, Biochemistry or a related field, and 1-2 years experience in the manipulation and characterization of nucleic acids. Skill and interest in DNA sequence analysis is essential. Additional experience in kilo-sequencing and chromosome walking is desirable.

Amgen is located in an attractive community about an hour northwest of Los Angeles, and offers a stimulating and challenging scientific environment as well as an attractive compensation and benefits program.

Qualified candidates should direct a resume and the names of three references to:

**Recruitment, Dept. 96
AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320**



Equal Opportunity Employer

RESEARCH INVESTIGATOR Cardiovascular Research- Pharmacology

The Squibb Institute for Medical Research, a recognized leader in the research and development of pharmaceuticals and related health care products, has an exciting opportunity for an individual possessing a Ph.D. in Cardiovascular Pharmacology or Physiology with 4 to 7 years of postdoctoral training. Responsibilities will include conceiving and implementing *in vivo* test systems for the evaluation of new therapeutic agents affecting vascular and cardiac function. The successful candidate will have documented interest in various animal models of hypertension. He/she will also participate in collaborative planning with other scientists, supervise technical staff, and provide written and oral presentations of research data.

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 C.V. to the Squibb Institute for Medical Research, Human Resources Department 403, Princeton, NJ 08543-4000. An equal opportunity employer.



SQUIBB

Where science comes to life.

We Said NO. So You Could Say YES!

As a dynamic biotechnology firm dedicated to the development of proprietary diagnostic systems and pharmaceuticals, IGEN, INC. is looking for molecular biologists to join our progressive scientific team.

MOLECULAR BIOLOGISTS

IGEN, INC. is now seeking highly motivated individuals who enjoy the challenge and rewards to be found in a new firm experiencing rapid expansion. Applicants for this position should possess a doctoral degree and have postdoctoral experience utilizing a wide variety of molecular biology techniques. Experience in the area of immunology is an advantage.

Responsibilities will include the development of new cloning projects involving the construction and screening of genomic and cDNA libraries.

If you are ready for the challenge and excitement of building a major company, contact IGEN, INC.

IGEN, INC. welcomes discussions of these opportunities with curious qualified candidates who may not be currently exploring employment alternatives. **Call in confidence to our Director of Human Resources at (301) 984-7964, or send your resume with salary history in confidence to: IGEN, INC., Department SM-1017B, 1530 East Jefferson Street, Rockville, Maryland 20852.**

IGEN, INC. *An Emerging
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Biotechnology*

An Equal Opportunity Employer

MANUFACTURING ASSOCIATE CELL BIOLOGIST PARENTERAL DRUGS

An industry leader in advanced biotechnology, **Amgen** develops products for significant applications, including human therapeutics, human diagnostics, animal health care, and specialty chemicals. We currently have an opening for a Manufacturing Associate Cell Biologist, Parenteral Drugs.

Individual will provide technical support in producing a recombinant DNA mammalian cell derived protein for use in human therapeutics. The qualified applicant will have a B.S. degree and a minimum of three years experience in a technical capacity in the production of parenteral drugs derived from mammalian cells, either in the pharmaceutical or biotechnology field. Requires an in-depth knowledge of associated equipment, GMP documentation processes, and validation procedures. Supervisory experience would be helpful.

Amgen offers a competitive compensation and benefits package, and is located in an attractive community about an hour northwest of Los Angeles. Qualified candidates should direct a resume to:

Recruitment, Dept. 37B
AMGEN
1900 Oak Terrace Lane
Thousand Oaks, CA 91320

AMGen

Equal Opportunity Employer



The Howard Hughes Medical Institute and

The National Institutes of Health

again announce

The Program for Research Opportunities for Medical Students 1987-88

HHMI-NIH Research Scholars can spend 9-12 months in one of the 1,000 research laboratories located at the NATIONAL INSTITUTES OF HEALTH, Bethesda, MD.

Salary, fringe benefits and travel will be provided.

Further information and application forms may be obtained by writing to the Howard Hughes Medical Institute, Research Scholars Program, 9101 Old Georgetown Road, Bethesda, Maryland 20814.

Applications invited from students in all American Medical Schools.

Your request for the application information should be received by December 31, 1986.

Final deadline for return of all application materials is January 15th, 1987.

POSITIONS OPEN

POSTGRADUATE RESEARCH BIOLOGIST OR ASSISTANT RESEARCH BIOLOGIST. Applications are invited for positions within a multidisciplinary cellular neurobiology group. Position is available for at least 3 years and involves studies of molecules supporting the survival and axonal regeneration of neurons in vitro and in vivo. Applicants must have an M.D. and/or Ph.D. with experience in histology, microsurgery, tracing techniques and morphometry, or neural cell culture, protein purification, monoclonal antibody generation, and gene cloning. Position will be commensurate with experience at levels of either postgraduate research biologist (\$21,948 to \$32,914) or assistant research biologist (\$34,600 to \$43,200). Send curriculum vitae, reprints, and the names of three persons for recommendation by 1 January 1987 to: **Marilee Bateman, Biology Department M-001, University of California, San Diego, La Jolla, CA 92093.**

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

RADIATION THERAPY—UNIVERSITY OF PENNSYLVANIA. Laboratory scientists at assistant, associate, and/or full professor levels for expanding research program. Interest should be in radiobiology, cell biology, molecular biology, or protein chemistry. *The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.* Inquiries should be directed to: **John Biaglow, Ph.D., Radiation Therapy, 3400 Spruce Street, Philadelphia, PA 19104.**

RESEARCH ASSISTANT position for person with masters' degree in embryology to work on a project on production of transgenic mice. Priority will be given to individuals with previous experience in micromanipulation of embryos. Excellent salary and fringe benefits. Apply to: **Dr. Chella David, Department of Immunology, Mayo Clinic, Rochester, MN 55905.** *An Equal Opportunity/Affirmative Action Institution.*

RESEARCH ASSISTANT—For experiments in molecular biology including cloning, sequencing, and expression of human granulocyte genes. Candidate will be expected to develop a research area related to the interest of the laboratory and to develop independent projects. Candidate must be familiar with the current literature of molecular biology, and will be expected to remain current through participation in laboratory meetings, divisional seminars, and attendance at national meetings. M.S. degree in microbiology or biochemistry, plus 2 years of experience. Salary \$18,000 per year. Qualified applicants contact: **Dr. Thomas A. Rado, Box 178, SCIENCE.**

An Equal Opportunity Employer

RESEARCH ASSISTANT PROFESSOR OF MEDICINE CANCER CENTER

To investigate melanocyte transformation and protein kinase C regulation. Will also participate in the day-to-day running of laboratory. Closing date for applications is 2 February 1987. Experience in quantitative biochemistry and/or molecular biology required; working knowledge or experience in statistics and tissue culture useful. Two to four years postdoctoral. Salary \$25,000 to \$30,000, depending on qualifications. Send curriculum vitae and three references to:

**Frank L. Meyskens, Jr., M.D.
Arizona Cancer Center
Tucson, AZ 85724
Telephone: 602-626-7926**

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

RESEARCH SCIENTIST—Research position to manage penaeid shrimp aquaculture project. Ph.D. in fisheries science, oceanography, zoology, or related field. Prerequisite: demonstrated management and research experience in shrimp aquaculture. Mail résumé, applicable reprints, statement of aquacultural accomplishments together with salary requirements, and names, addresses, telephone numbers of three references to: **OI Consultants, Inc., Makapuu Point, Waimanalo, HI 96795.** Closing date 7 November 1986.

POSITIONS OPEN

AMERICAN BIOGENETICS

RESEARCH SCIENTISTS

American Biogenetics Corporation, specializing in the genetic engineering and biodesign of microorganisms which produce specialty chemicals, has positions available for highly motivated research scientists. American Biogenetics is seeking to fill positions in:

● PROTEIN CHEMIST/ENZYMOLOGIST

To chemically modify and stabilize enzymes for commercial processes. Successful applicants must possess a Ph.D. and have at least 2 years of postdoctoral or equivalent experience.

● FERMENTATION CHEMIST/BIOCHEMICAL ENGINEER

To scale up fermentation of both bacterial and yeast cultures for pilot-scale studies. Successful applicants must possess an advanced degree and/or equivalent experience.

American Biogenetics offers a challenging and creative working environment and excellent opportunities for personal and scientific development. American Biogenetics is located in a desirable coastal area of Southern California.

Send curriculum vitae and the names of three references to: **G. Wesley Hatfield, Ph.D., American Biogenetics Corporation, 19732 MacArthur Boulevard, Suite 130, Irvine, CA 92715.**

SCIENTIFIC DIRECTOR—The American Red Cross Blood Services, Northwest Ohio Region, invites application to establish/direct a research and development department. Candidate must hold a Ph.D. in a biological science, and experience in blood, tissue, or organ preservation is essential. Faculty appointment at assistant/associate professor level at local medical school is available and encouraged. Send curriculum vitae to: **American Red Cross, 2275 Collingwood Boulevard, Toledo, OH 43620.** *Equal Opportunity/Affirmative Action Employer.*

SCIENTIST. SEND RESUME TO: Employment Security Department ES Division, Attention: AEC Number 45799, Olympia, WA 98504. JOB DESCRIPTION: Responsible for designing, planning, and executing experiments. Must critically evaluate experimental results and help design new experiments based on that evaluation. Must interact and collaborate with other scientific personnel in the areas of virology, molecular biology, and immunology. Must report and communicate scientific ideas and experimental findings in formal/informal presentations. Must develop and maintain contacts with members of the scientific community outside of employer's organization as a source of additional expertise. Responsible for mammalian recombinant DNA cloning, expression and mapping, genetic analysis, and gene expression systems in human vaccinia virus. Responsible for working in bio-safety containment environments handling highly infectious agents. **REQUIREMENTS:** Ph.D. in biochemistry (molecular virology), plus 2 years as graduate assistant in the area of research related to the duties outlined in job description, or, in lieu, 2 years of research in industry. **SALARY:** \$35,560 per annum; no overtime. Prevailing working conditions, 40 hours per week, Monday through Friday, position in Seattle, WA. On-the-job training not offered. *Equal Opportunity Employer.*

SENIOR FELLOW

Position in the Neurophysics Laboratory, University of Pittsburgh, School of Medicine, Western Psychiatric Institute and Clinic, for a Ph.D. biophysicist with extensive experience in solid-state NMR of biological materials. Postdoctoral experience and quality publications required. The responsibilities will include the application of high-resolution and solid-state NMR techniques to the study of biological (including human) tissues. Salary: \$20,000 per annum. Send applications and three letters of recommendation to: **Dr. J. W. Pettegrew, Neurophysics Laboratory, University of Pittsburgh, School of Medicine, Western Psychiatric Institute and Clinic, 3811 O'Hara Street, Pittsburgh, PA 15213.** Applications and letters of recommendation must be received within 30 days from the date of this publication. *The University of Pittsburgh is an Equal Opportunity and Affirmative Action Employer.*

POSITIONS OPEN

SCIENTIST BLOOD BANK INSTRUMENTATION

To identify, develop, and implement new instruments to improve nationwide blood center operations. Doctoral level scientist with minimum 3 years of experience in immunohematology or laboratory diagnostics and knowledge of current testing technologies. Good communications skills essential. Send résumé and salary requirements to: **Dr. L. I. Friedman, American Red Cross, Product Development Laboratory, 9312 Old Georgetown Road, Bethesda, MD 20814.** *Equal Opportunity Employer, M/F/H/V.*

SENIOR LEVEL PHARMACOLOGIST/ TOXICOLOGIST

Applications are invited for a senior level tenure faculty position in a division of six faculty members with funded programs in cardiovascular, pulmonary, CNS, and molecular pharmacology. Faculty provide courses to pharmacy students and training to graduate students and postdoctorals in a new facility. Candidates must have a Ph.D., a distinguished record of scholarship, professional achievement, and extramural funding. A background in pharmacy is desirable. An option exists to assume the division directorship. Applications, including a curriculum vitae and names of three references, should be sent before 15 January to: **Dr. William Lubawy, University of Kentucky, College of Pharmacy, Rose Street, Lexington, KY 40536-0082.** *An Affirmative Action/Equal Opportunity Employer.*

COLBY COLLEGE, WATERTOWN, MAINE, DEPARTMENT OF BIOLOGY invites applications for a **TENURE-TRACK POSITION** at the level of **ASSISTANT PROFESSOR**, beginning September 1987. A Ph.D. and a strong commitment to undergraduate education are required. Broad training and interests in the biological sciences, familiarity with liberal arts colleges, teaching experience, and/or postdoctoral training are desirable. Candidates should have a demonstrated interest and experience in the study of organismic phenomena in eukaryotes using cellular and/or molecular methods of analysis. Possible areas of expertise which might be useful to the department include developmental biology, endocrinology, functional anatomy, and immunology. Responsibilities may include teaching in part of the department's core curriculum, in advanced courses in the successful candidate's areas of specialization, in courses for non-majors, and in the departmental seminar for biology majors. An active research program, including supervision of undergraduate research will also be expected. Submit letter of application, curriculum vitae, reprints, and transcripts of undergraduate and graduate records, and have three letters of reference sent to: **Dr. Arthur K. Champlin, Chairman, Department of Biology, Colby College, Waterville, ME 04901.** Completed applications should be received by 15 December 1986. *Colby College is an Affirmative Action/Equal Opportunity Employer.*

TENURE-TRACK FACULTY POSITION IN BIOCHEMISTRY DEPARTMENT OF BIOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Candidates are sought for a tenure-track position in the field of biochemistry.

Candidates should have significant research accomplishments in the area of biochemistry of proteins, enzymes, nucleic acids, or membranes. While there is broad latitude in the research interests of the candidates, we are particularly interested in those engaged in studies on chemistry, structure, and mechanism of action of biological molecules.

The successful applicant will be expected to conduct an active research program and to participate in the teaching program of the department.

Applicants should send curriculum vitae, a summary of their proposed research program, and the names of at least three scientists who can provide an evaluation of the candidate's past accomplishments and future potential.

Send applications to:

**Professor Uttam L. RajBhandary
Chairman, Biochemistry Search Committee
c/o Biology Headquarters, Room 56-511
Massachusetts Institute of Technology
Cambridge, MA 02139**

An Equal Opportunity/Affirmative Action Employer

State University Of New York At Albany

3 tenure-track faculty positions in Biological Sciences, 1 in Chemistry available September 1987

MOLECULAR BIOLOGIST — Assistant Professor Biology

We seek an individual doing outstanding experimental work in an area such as, but not limited to, the following: protein engineering; DNA topology; structural, physical or chemical characterization of nucleic acid-protein interactions; preferably using techniques of gene splicing and site-directed mutagenesis. The individual will join the molecular biology faculty within the department which includes active research groups studying protein and nucleic acid structure, macromolecular design, genetic recombination, DNA repair, autocatalytic RNA splicing, and genetic regulation in prokaryotes and eukaryotes.

DEVELOPMENTAL NEUROBIOLOGIST — Assistant Professor Biology

We are especially interested in a person doing outstanding work on the factors controlling synapse formation and stabilization in simpler systems (e.g., invertebrates, the spinal cord or neuronal culture) using modern cellular or molecular techniques. The successful candidate will join a group of five departmental neuroscientists interested in the development and plasticity of neural circuits in systems ranging from cat to cricket. Additional vigorous neuroscience groups exist in Albany at the new School of Public Health Sciences and at Albany Medical College.

ELECTRON MICROSCOPIST — Research Associate Biology

We seek a person using the electron microscope to study cellular or neural biology, especially someone who uses molecular probes (e.g., immunocytochemistry), and who will interact with our present and future faculty in cellular and neural biology. The successful applicant will be responsible for supervising the EM facility and establishing an independent research program.

Successful candidates for these positions will be expected to establish a strong extramurally supported research program, participate in teaching and train graduate students. Applicants should submit curriculum vitae, a summary of research plans, names of three referees, and arrange to have letters of recommendation sent to the appropriate search committee: Molecular Biology Search Committee, Neurobiology Search Committee or Electron Microscopy Search Committee; all at the Department of Biological Sciences, SUNY Albany, 1400 Washington Avenue, Albany, NY 12222. Application deadline is December 15, 1986. Salaries are very competitive; excellent laboratory space and equipment provided.

BIOCHEMIST — Assistant/Associate Professor, Chemistry

We seek a bioinorganic or bioorganic chemist whose work emphasizes the structure and function of biologically important macromolecules, although other areas of research will be considered. Candidates should be able to interact with the Chemistry and Biology faculties and establish an innovative research program. Commitment to teaching biochemistry at the undergraduate and graduate levels is essential. Applicants should send a curriculum vitae, a statement of research and teaching interests and three letters of recommendation to Dr. Frank M. Hauser, Search Committee Chairman, Department Chemistry, SUNY/Albany, Albany, NY 12222.

SUNY is an Affirmative Action/Equal Opportunity Employer. Applications from minority persons, women, handicapped persons, and Vietnam-era veterans are especially welcomed.

RECEPTOR BIOCHEMIST

Ph.D. LEVEL

The Pharmaceutical Research Division of Warner-Lambert has an immediate opening for a scientist with expertise in receptor mechanisms to join our Biochemistry Section. The selected candidate will participate in a multidisciplinary environment, generating novel drug discovery strategies and evaluation techniques for a variety of therapeutic categories.

Qualified applicants will possess the following:

- Ph.D. or equivalent in biochemistry, pharmacology, or neuroscience.
- 0-3 years postdoctoral experience in one or more of the following areas: Cell culture, receptor binding, peptides, or second messenger systems such as adenylate cyclase and phosphatidylinositol.
- Excellent oral and written communication skills are essential as is a documented record of research excellence.

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Qualified applicants should send curriculum vitae in confidence to: Ms. D. Love, Human Resources Supervisor, Warner-Lambert/Parke-Davis, 2800 Plymouth Road, Ann Arbor, Michigan 48105.

**WARNER
LAMBERT**

EQUAL OPPORTUNITY IN ACTION

POSITIONS OPEN

CALIFORNIA STATE UNIVERSITY, LONG BEACH (CSULB). TENURE-TRACK POSITIONS available fall 1987. Must have Ph.D., postdoctoral experience preferred. A commitment to teaching and research is required.

ANATOMY/PHYSIOLOGY cell physiologist, reproductive physiologist (joint with women's studies); **BIOLOGY** marine algal physiologist; **CHEMISTRY** organic; **GEOLOGY** hydrology/organic geochemistry/geophysics with emphasis in electrical methods; **PHYSICS/ASTRONOMY** electrooptics/instrumentation or intermediate energy physics.

Send résumé, evidence of teaching effectiveness, research plans, transcripts, and three letters of recommendation to: **Dean, School of Natural Sciences, CSULB, Long Beach, CA 90840.** Positions open until filled—interviews likely to commence 1 December 1986. *CSULB is an Equal Opportunity/Affirmative Action Title IX Employer.*

UNIVERSITY OF UTAH DEPARTMENT OF BIOCHEMISTRY

TWO TENURE-TRACK POSITIONS are available for autumn 1987. Preference will be given to applicants at the level of **ASSISTANT PROFESSOR**, but candidates for **ASSOCIATE PROFESSOR** will also be considered. Applicants should hold a doctoral degree, have postdoctoral experience, and demonstrable research ability. Although areas of research are open, they should fall into the broad province traditionally understood as being biochemistry. Teaching responsibilities are largely to graduate and medical students. Interested individuals should submit curriculum vitae, a statement of research background and interests, and three letters of recommendation to: **Faculty Search Committee, Department of Biochemistry, University of Utah School of Medicine, Salt Lake City, UT 84132.** Deadline for applications is 31 December 1986; late applications may be considered if openings are still available. *Equal Opportunity/Affirmative Action Employer.*

THREE MOLECULAR BIOLOGISTS/ GENETICISTS SOUGHT FOR WAKSMAN INSTITUTE, RUTGERS UNIVERSITY

As a part of a major drive to strengthen the biological sciences at its universities,* the state of New Jersey has provided new resources to the Waksman Institute at Rutgers. A new research wing to the institute was completed in September 1985, and approximately 10 professorial positions will be filled by faculty with interest in the broad areas of gene regulation and biomolecular structure. It is anticipated that three of these positions will be filled within the next year in the general area of molecular biology/genetics. Emphasis will be placed on strengthening the institute's research programs in plant biology and microbial genetics, but recruitment will not be limited to those areas. Positions can be filled at the junior (tenure track, assistant professor) and/or senior (professor) levels.

Applicants are expected to develop a strong, vigorous research program and to participate in graduate level teaching. Interested persons should submit curriculum vitae, description of current and proposed research, and names of three or more referees to:

Professor Daniel F. Klessig
Associate Director for Research and Planning
Waksman Institute
Rutgers, The State University of New Jersey
P.O. Box 759
Piscataway, NJ 08854

Positions will remain open until filled. Rutgers University is an Equal Opportunity/Affirmative Action Employer.

*Other initiatives in progress at Rutgers and the University of Medicine and Dentistry of New Jersey in New Brunswick are directed across the life sciences from medicine to agriculture. Addition of 75 or more new faculty to the biological sciences is anticipated over the next 5 to 7 years in the Departments of Biological Sciences, Biochemistry, Molecular Genetics and Microbiology, Anatomy, and Physiology; in the future Department of Molecular Biology and Biochemistry; and in three new research centers/institutes including The New Jersey Center for Advanced Biotechnology and Medicine, The Institute for Biomolecular Research in Agriculture and Environmental Sciences, and The Environmental and Occupational Health Sciences Institute.

GRANTS

GRADUATE AND POSTGRADUATE RESEARCH GRANTS

The **Biological Research Station of the E. N. Huyck Preserve** announces the 1987 to 1988 competition for grants in aid (maximum: \$3500) for biological research for investigations that utilize the resources of the preserve. The 2200 acre preserve is located on the Helderberg Plateau, in the towns of Rensselaerville and Berne, 30 miles southwest of Albany. Habitats include northeast deciduous-hemlock forests, conifer plantations, old fields, permanent and intermittent streams, 10- and 100-acre lakes, and a 150-foot waterfall. Housing and laboratory space may be provided. Deadline: 1 January 1987. Application material: **Huyck Preserve, Box 188, Rensselaerville, NY 12147.**

SYMPOSIUM

INTERNATIONAL SYMPOSIUM ON HEMOSTATIC IMPAIRMENT ASSOCIATED WITH VIRAL HEMORRHAGIC FEVER IMPAIRMENT, Frederick, Maryland, 26 to 29 May 1987. This symposium, sponsored by the United States Army Medical Research Institute of Infectious Diseases, will review the pathogenesis of viral hemorrhagic fevers with emphasis on the hemorrhagic syndrome. Since attendance will be limited, interested investigators should contact the following as soon as possible: **Hemostasis Conference, Medical Division, USAMRIID, Ft. Detrick, Frederick, MD 21701.** Proceedings will be published.

TRAINING PROGRAM

GRADUATE TRAINING PROGRAM IN NEUROSCIENCE—The Neuroscience Program at The Milton S. Hershey Medical Center of The Pennsylvania State University has assistantships available in September 1987. This interdepartmental program is designed to confer a Ph.D. degree with a major in neuroscience after 4 years of study. A master's degree program is also available. Participating faculty have established research programs in molecular biology of the nervous system, neurophysiology, neuroendocrinology, behavioral science, neuropharmacology, and cerebral metabolism. Interested candidates are invited to apply to: **Dr. Robert Page, Chairman, Neuroscience Program, The Milton S. Hershey Medical Center, The Pennsylvania State University, P.O. Box 850, Hershey, PA 17033.** *An Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN THE DEPARTMENT OF ANATOMY AND NEUROBIOLOGY UNIVERSITY OF CALIFORNIA, IRVINE

Several positions for research in individual laboratories in the department are available for candidates who have demonstrated exceptional research promise at the predoctoral or postdoctoral level. The emphasis of research in the department is in the areas of neuroanatomy, neurophysiology, and molecular biology. Outstanding applicants will be invited for seminar presentations. The faculty of the department and their research interests are:

- Dr. Robert Blanks:** Eye movement control.
- Dr. Lyle Dearden:** Growth in cartilage.
- Dr. James Fallon:** Chemical neuroanatomy.
- Dr. Chris Gall:** Chemical neuroanatomy, neural plasticity in development.
- Dr. Roland Giolli:** Visuomotor system.
- Dr. Stewart Hendry:** Immunocytochemistry.
- Dr. Paul Isackson:** Molecular neurobiology.
- Dr. Edward Jones:** Sensory-motor anatomy and physiology.
- Dr. Leonard Kitzes:** Auditory anatomy and physiology.
- Dr. Charles Ribak:** Epilepsy, neurotransmitters and circuits.
- Dr. Richard Robertson:** Organization of the forebrain.
- Dr. John Swett:** Spinal cord and peripheral nervous system.

Applications or inquiries for additional information should be sent to: **Dr. Edward G. Jones, Department of Anatomy and Neurobiology, University of California, Med Surge II, Room 364, Irvine, CA 92717.** *An Affirmative Action/Equal Opportunity Employer.*

FELLOWSHIPS

FELLOWSHIPS

Research applications from women in one of the mathematical, physical, or biological sciences are being accepted. Appointments will be made regardless of race, nationality, creed, or marital status: **Grants-in-Aid—\$750**; for students in a degree program. Deadline: 1 February 1987. **Eloise Gerry Fellowships—\$1500 to \$4000**; applicant must have her Ph.D. or M.D. Deadline: 1 December 1986. For further information: **Sigma Delta Epsilon, Graduate Women in Science, Inc., 9650 Rockville Pike, Bethesda, MD 20081**; telephone: 301-530-7017.

POSTDOCTORAL FELLOWSHIP, 1 year, with possible extension. Experience in protein purification techniques necessary. Small animal surgery and cell culture helpful. Salary competitive. Research in pathogenesis of atherosclerosis related to the central nervous system. Contact: **William H. Gutstein, M.D., Department of Pathology, Basic Science Building, New York Medical College, Valhalla, NY 10595.** Telephone: 914-993-4154.

POSTDOCTORAL FELLOWSHIP IN NEUROPHARMACOLOGICAL FEATURES OF EXPERIMENTAL BRAIN INJURY. (Two to three years). Available immediately. Opportunities for qualified Ph.D. in internationally known interdisciplinary research group. Potential faculty appointment. Research areas include autoradiographic techniques of receptor binding and regional glucose utilization to be conducted in models of traumatic and ischemic brain injury. Preference given to candidates with background in autoradiographic techniques, receptor binding, or neurochemistry. Stipend of \$20,000. Send curriculum vitae and three letters of recommendation to: **Ronald L. Hayes, Ph.D., Division of Neurosurgery, Medical College of Virginia, Box 693, MCV Station, Richmond, VA 23298-0001.**

CONFERENCE

The New York Academy of Sciences
and
Fondazione Giovanni Lorenzini
Conference on
CALCIUM ANTAGONISTS
10 to 13 February 1987
Sheraton Centre Hotel, New York City

This meeting will examine present research trends in the field of pharmacological control of calcium ion metabolism. The properties of calcium channels, the biochemical correlates of calcium entry, and activation of cells in various tissues will be considered. Calcium antagonist pharmacology will receive special emphasis, both in view of new therapeutic applications and their use as pharmacological tools for the understanding of basic cellular mechanisms controlling calcium homeostasis.

The meeting will also present information on a variety of aspects concerning noncardiovascular therapeutic applications. Specific sessions will address their possible role in peripheral vascular disease, cerebral vascular disease, subarachnoid hemorrhage, migraine, epilepsy, and vertigo. A session will be devoted to the use of calcium antagonists in pulmonary disease, liver and kidney cytoprotection, and dysmenorrhea. Biochemical, pharmacological, and clinical experts on calcium antagonists will attend.

Conference co-chairmen: **Paul M. Vanhoutte, M.D., Ph.D., The Mayo Clinic, Rochester, MN**; **Rudolfo Paoletti, M.D., University of Milan, Italy**

There will be contributed poster sessions. The deadline for the submission of abstracts is 10 November 1986. Abstracts of 200 words should be sent to: **Ellen Marks, Conference Department, The New York Academy of Sciences, 2 East 63 Street, New York, NY 10021.**

For program and registration information, please contact:

Conference Department
The New York Academy of Sciences
2 East 63 Street
New York, NY 10021
Telephone: 212-838-0230

MOLECULAR BIOLOGY (BS/MS)

The Molecular Biology Research Group of The Upjohn Company has a position for a highly motivated research associate to assist in research projects involving large scale DNA sequencing, plasmid cleaning, DNA and RNA isolation and characterization. Expertise in both Chemical and Enzymatic DNA sequencing methods required. The position offers an opportunity to interact with a variety of Upjohn research programs. This position requires a B.S. or M.S. in molecular biology, biochemistry, microbiology or related field and several years of relevant research experience. Scientific computer background in the analysis of DNA structure and function would be a strong plus.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a rich mix of cultural, educational and recreational pursuits including numerous lakes and a four-season climate. Upjohn offers the opportunity for career growth, a competitive salary, commensurate with experience, a comprehensive benefits program and relocation assistance.

For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to ad number 20014-A when calling.



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For further information and application materials please write to:

Associateship Programs (JH608/S4)
National Research Council

2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Deadlines for application are
January 15, April 15 and August 15.

RESEARCH MANAGER, BIOPHYSICS

The Office of Naval Research is seeking a highly qualified individual to plan and manage a contract research program in biophysical aspects of environmental responses. The sponsored research is conducted principally at universities and private laboratories, with research performed by leading scientists in the field. This is a Civil Service position at the GM-13 or GM-14 level (\$37,599-\$57,759), depending on qualifications.

The individual selected will establish goals for and conceive, organize and direct research and development programs on physical processes within cellular compartments, particularly the cell membrane. Additionally, the incumbent must be knowledgeable in research on electromagnetic field effects in order to manage an ongoing program on biomolecular interactions with electromagnetic energy sources. Responsibility of the incumbent includes analysis of research proposals, recommending appropriate action, following the progress of funded contracts in thorough technical detail, determining when contracts and programs should be terminated, in-

sureing timely and effective dissemination of research results to other Navy commands having a need for those results, and insuring that the program content meets anticipated Navy needs. Incumbent will be required to describe and justify his/her program both in writing and orally within the organization and to responsible bodies in the Navy and DoD. An important aspect of this position is to conceive, develop and market new research ideas to higher Navy management.

Applicants must have (1) a Ph.D. or equivalent in the biological sciences with particular emphasis on biophysics and at least one year of professional experience or (2) acquired a minimum of three years of progressively responsible professional experience. Demonstrated research experience in biophysics is preferred.

Interested persons should send a resume, list of publications and a Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the address below), to:



Office of the Chief of Naval Research
Civilian Personnel Division, OCNR Code 01242P
ATTN: Announcement #86-55(S)
800 North Quincy Street
Arlington, VA 22217-5000

U.S. Citizenship Required

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Applications will be accepted through 23 January 1987 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information and supplemental forms, please call (202) 696-4705.



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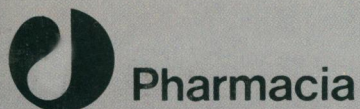
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