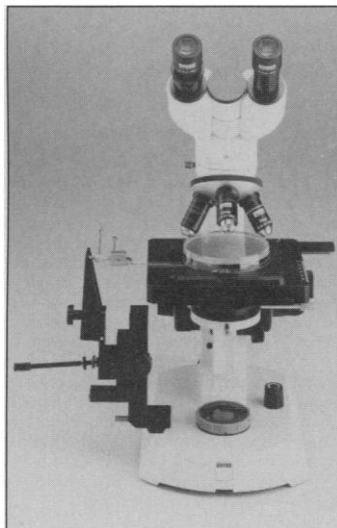


Extended Memory Access Software

The X-arRAY 2.0 software library allows the user to allocate, access, and manipulate up to a gigabyte of extended memory from virtually any high-level real-mode language compiler, such as C, Fortran, BASIC, or Pascal. X-arRAY 2.0 is independent of both the target language and its specific implementation. Access to extended memory is achieved without expensive flat memory model operating systems, 32-bit compilers, DOS extenders, or MS-Windows. X-arRAY 2.0 requires an Intel 386/387, 486, or equivalent IBM-compatible computer with AT or PS/2 architecture, running DOS 2.0 or higher. Davis Associates. Circle 90.

Yeast Genetics Microscope

The TETRAD microscope system is designed to meet the needs of the yeast geneticist. Users can perform extremely accurate microdissection and micromanipulation of spores on agar surfaces. The TETRAD features a stable, microscope-mounted manipulator with rack-and-pinion coarse movement control and a vibration-free joystick control mechanism for ultrafine movements. The stage features easy-to-read scales and graduated click stops



in both x and y directions that ensure accurate documentation of spore locations. Carl Zeiss Inc. Circle 91.

Recycled Microtube Rack

The Ultra Rack is a heavy-duty microtube rack made of highest grade recycled polypropylene. The autoclavable rack holds 48 0.5- or 0.65-ml tubes in alpha-numeric configuration. Midwest Scientific. Circle 92.

Digital Image Camera

The Kodak professional DCS 200 digital camera system features a 1.54-million-pixel sensor in a Nikon 8008s camera body. A small computer software interface port enables the camera to link directly to Apple Macintosh or IBM-compatible computers. A charge-coupled device array combined with the camera provides rapid auto focus, exposure control, motorized advance, and enormous lens flexibility. Applications include medical and scientific documentation, especially when instant capture of high-resolution microscopy images is needed. Eastman Kodak Co. Circle 93.

Antibody Design Software

AbM is a software program that can accurately predict three-dimensional (3-D) antibody structure from sequence, reduce modeling time from months to days, and expedite "humanization" of antibodies. Antibodies have been difficult to model because it is necessary to know the exact amino acid sequence and 3-D

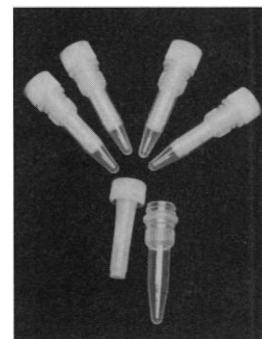
shape in order to design an antibody to perform a specific function. AbM features a novel algorithm that combines the knowledge base of existing protein structures with computational methods. AbM can model 3-D structures to within medium-resolution x-ray crystallographic accuracy in a matter of hours or days starting from sequence. AbM gives the user a 3-D structure—a working model—that lets the user engineer rational changes to the antibody instead of relying on guesswork. Researchers can easily produce mouse monoclonal antibodies, but the human immune system usually rejects them as foreign proteins. Scientists have used AbM to engineer "humanized" antibody combinations less likely to be rejected, according to the manufacturer. Oxford Molecular. Circle 94.

Data Visualization Software

CoVis is a software program for visualization of large data sets that features nine different kinds of animated graphs. It is the first program capable of displaying animated views of data on a personal computer, a capability formerly available only on workstations, according to the manufacturer. The animation is in real time, and CoVis is interactive. The program offers researchers working with mathematical models, data acquisition boards, chaotic systems, and other sources of large or dynamic data sets a new tool for visualizing data. The program requires an IBM PC, PS/2 or compatible, running DOS 2.0 or higher; 512 K random access memory; and a hard disk. Data can be imported from ASCII, dBASE, Excel, Lotus 1-2-3, Quattro, and other data files. CoHort Software. Circle 95.

Thermocycling Microcentrifuge Tubes

SepraTUBES are sterile microcentrifuge tubes designed for use in thermocyclers without the need for an oil overlay. SepraTUBES are configured to fit all



standard temperature cyclers that accept 0.5-ml microtubes. The screw cap incorporates a hollow shaft that fits snugly into the tube and ends with a double positive seal. Condensation is reduced by a hollow shaft that acts as an insulator. Sample volumes of 20 to 100 μ l can be run without a mineral oil overlay. Integrated Separation Systems. Circle 96.

Literature

SQL*LIMS from PE Nelson describes the analytical laboratory data handling and management functions of the company's laboratory information management system. Perkin-Elmer Corp. Circle 97.

Protector Laboratory Fume Hoods and Accessories is a 96-page catalog that includes cutaway illustrations of key features and benefits, specifications, dimensional data, and accessory information. Labconco Corp. Circle 98.

The New ZEOS/SL Notebook is Turning a Few Heads is a brochure about a notebook computer, the Freestyle/SL, with a tilt and swivel screen. ZEOS International. Circle 99.

Super Sequential ICP/Echelle Spectrometer: Performance, Versatility, Productivity is a brochure that highlights the abilities of this instrument. Leeman Labs. Circle 100.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Science

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POSITIONS OPEN

CELLULAR PHYSIOLOGIST University of Tennessee, Knoxville (UTK)

The Department of Zoology, University of Tennessee, Knoxville, invites applications for a tenure-track position at the level of **ASSISTANT PROFESSOR**, effective 1 August 1993. The successful candidate will be expected to develop a vigorous and externally funded research program in **Cellular Physiology**. A Ph.D. (or equivalent) and at least one year of postdoctoral experience is required. The successful candidate will be expected to supervise M.S. and Ph.D. students, and to participate in the teaching of undergraduate and graduate courses in cell, systems, and comparative animal physiology. Applicants are requested to submit curriculum vitae, statement of research goals, statement of teaching interests, and should arrange to have three letters of recommendation sent to: **Dr. Gerald L. Vaughan, Department of Zoology, University of Tennessee, Knoxville, TN 37996-0810; (Telephone: 615-974-2371; FAX: 615-974-0978).** Review of applications will begin on 15 January 1993. *UTK is an Equal Employment Opportunity/Affirmative Action/Title IX/Section 504/ADA Employer.*

CELLULAR ENDOCRINOLOGIST University of Arizona

The Departments of Physiology and Obstetrics and Gynecology (ObGyn) are jointly seeking a tenure-track **ASSISTANT PROFESSOR**. Preference will be given to applicants with research expertise in reproductive endocrinology, using the techniques of molecular biology. The tenure line will be in Physiology. Successful candidates should have postdoctoral experience and must document their potential to develop an independent research program in reproductive endocrinology. The development of research interactions with relevant colleagues in ObGyn is essential and university-wide interactions are encouraged. Teaching responsibilities will include formal lectures on cellular and systems endocrinology, tutorials with ObGyn residents, and participation in a university-wide Ph.D. program in the physiological sciences. Submit curriculum vitae and statement of research interests and have three supporting letters sent to: **Dr. Patricia B. Hoyer, Cellular Endocrinologist Search Committee, Department of Physiology, College of Medicine, University of Arizona, Tucson, AZ 85724.** To insure consideration, applications should be submitted by December 31, 1992; however, applications will be accepted until the position is filled. *The University of Arizona is an Affirmative Action/Equal Opportunity Employer and applications from females and minority group members are strongly encouraged.*

ASSISTANT PROFESSOR BIOCHEMISTRY

Western Michigan University seeks applications for a tenure-track assistant professor position in chemistry for Fall 1993, pending budgetary approval. Position requires a Ph.D. degree in biochemistry, an undergraduate degree major in chemistry, the completion of a postdoctoral appointment with research in a field applicable to the environment, e.g., toxicology, and demonstrated potential for teaching, research and publication. *Western Michigan University, a Carnegie Classification Doctoral I Institution, has embarked upon a vigorous affirmative action program and encourages applications from women and members of minority groups.* Send letter of application, curriculum vitae, academic transcripts and three letters of recommendation to: **Michael McCarville, Chair, Chemistry Department, Western Michigan University, Kalamazoo, MI 49008-3842.** Review of applications will begin December 1, 1992 and continue until the position is filled.

PLANT BIOLOGIST, EARLHAM COLLEGE, ASSISTANT PROFESSOR, for a one-year sabbatical replacement beginning September 1993. Teaching responsibilities may include plant structure/function, microbiology, cell biology, and involvement in team-taught introductory courses. Ph.D. required. Submit letter of application, curriculum vitae, statement of teaching philosophy, and three letters of recommendation to: **Dr. Leslie Bishop, Department of Biology, Earlham College, Richmond, IN 47374.** Review of applicants will begin on January 1, 1993. *Women and minorities are especially encouraged to apply. Earlham College is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF GENETICS

The Biology Department at Boston University is seeking an Assistant Professor, tenure-track, with interests in modern problems in molecular biology and genetics (e.g., neurodevelopment, yeast cell cycle, etc.). The successful candidate is expected to have at least two years of postdoctoral experience and will be expected to initiate an active, externally funded research program. He or she will also be expected to teach genetics at the undergraduate level and an upper level course in his or her area of specialization. Salary and start-up costs are competitive for the initiation of a first-rate program. The Biology Department at Boston University has 30 faculty members in all areas of biology, including cell, molecular, and developmental biology, as well as neurobiology and biochemistry. Please send a letter of interest (with past research experience and future research plans), curriculum vitae, three reference letters, and reprints of important published works by January 15, 1993 to: **Dr. Edward Loechler, Chair, Genetics Search Committee, Biology Department, Boston University, 5 Cummings Street, Boston, MA 02215.** *Women and minorities are strongly encouraged to apply. Boston University is an Equal Opportunity/Affirmative Action Employer.*

TROPICAL ECOLOGIST

The Department of Biology at the University of Missouri-St. Louis seeks to fill a tenure-track position at the **ASSISTANT PROFESSOR** level in the broad area of tropical ecology and conservation. Responsibilities for the position include research and teaching in the candidate's area of expertise, and administrative service associated with the title of Associate Director of the International Center for Tropical Ecology. Priority will be given to candidates with: research interests in avian ecology, experience in program development, and an ability to interact with international graduate students. Teaching may include ornithology, an undergraduate course in ecology for nonmajors, and a graduate course. A Ph.D. and two or more years of postdoctoral experience are required. Applicants should submit the following materials: letter of interest, curriculum vitae, statement of research, selected publications, and three names of references to: **Dr. Victoria Sork, Search Committee Chair, Department of Biology, University of Missouri-St. Louis, 8001 Natural Bridge, St. Louis, MO 63121-4499.** Applications will be reviewed as they arrive. **FINAL DEADLINE: 15 January 1993.**

The University of Missouri-St. Louis is an Affirmative Action/Equal Opportunity Employer committed to excellence through diversity.

PHYSIOLOGIST

Tenure-track position, **ASSISTANT PROFESSOR**, beginning Fall 1993. Expected to establish a vigorous, extramurally funded research program. Special consideration given to broadly trained applicants who use modern approaches to study physiological processes at integrative or organismal levels. Teaching includes participation in core undergraduate physiology and graduate specialty courses. Generous research set-up funds available. To apply, send curriculum vitae, reprints, description of research plans, and three letters of recommendation by **January 15, 1993.** Send to: **Dr. Charles Drewes, Physiology Search Committee, Department of Zoology and Genetics, Iowa State University, Ames, IA 50011.**

BOTANIST. Western Washington University Biology Department. Tenure-track position at **ASSISTANT** or **ASSOCIATE PROFESSOR** level to begin fall 1993; Ph.D. required. We prefer expertise in systematics, but invite applications from all interested botanists. The department stresses excellence in undergraduate teaching. Duties include teaching introductory plant biology, advanced courses in the area of expertise, and general curricular courses. Active pursuit of grants to maintain a research program at WWU involving students is expected. Send curriculum vitae, a statement of teaching and research interests and accomplishments, recent reprints, and four letters of reference to: **H. Kohn, Search Committee Chair, Biology Department, Western Washington University, Bellingham, WA 98225-9060, Telephone: 206-676-3627; FAX: 206-676-3148.** Review will begin on January 18, 1993. *An Affirmative Action/Equal Opportunity Employer.*

Training And Research Opportunities.

Listed below are a few of the excellent opportunities for conducting research that are now available with leading scientists at the National Institutes of Health.

Cancer Epidemiology **Joseph F. Fraumeni, Jr., MD**

Opportunities for research in epidemiology include studying the role of occupation, radiation, diet/nutrition, genetics, infectious agents, lifestyle factors, medications, and environmental pollution in the development of cancer. Research opportunities in biostatistics and methods development are also available. Applications are accepted on a continuing basis from candidates with a variety of academic, clinical and research backgrounds. Epidemiology and Biostatistics Program (OE-22), NCI, Executive Plaza North, Room 543.

Cell Division and Proliferation **Shelby L. Berger, PhD**

Positions in biochemistry and cell or molecular biology are available to study the dynamic aspects of chromatin function. Emphasis is on a human acidic protein essential for cell division. The project involves gene transfection and expression, mutagenesis, antisense, phosphorylated proteins and peptides, chromatin structure, and cell cycle-related functions. Laboratory of Biochemistry (OE-22), NCI, Building 10, room B1B38.

Electron Paramagnetic Resonance Spectroscopy **Ronald P. Mason, PhD**

Staff Fellow (assistant professor equivalent) position is available in the Free Radical Metabolite Workgroup. Measurements of *in vitro* and *in vivo* samples are made using Electron Paramagnetic Resonance (EPR) spectrometers interfaced with computers for studies in biochemistry, pharmacology (especially drug metabolism) and toxicology. Candidates should have at least five years experience with EPR, experience in free radical and transition metal chemistry, a strong computational background, and no more than seven years of postdoctoral research experience. Laboratory of Molecular Biophysics (OE-22), NIEHS, P.O. Box 12233, Mail Drop 10-03, Research Triangle Park, NC 27709.

Gene Regulation During Metamorphosis **Yun-Bo Shi, PhD**

The molecular mechanism of amphibian metamorphosis, a process that affects every organ of a tadpole, is being investigated. The process is entirely controlled by thyroid hormone and many thyroid hormone response genes have been identified. The regulation and the functions of these genes during metamorphosis are

being studied. Laboratory of Molecular Embryology (OE-22), NICHD, Building 6, Room B1A02.

Neurophysiology **Vittorio Gallo, PhD and Mark Mayer, PhD**

Ligand-gated ion channels in glial cells are being studied using patch-clamp recording combined with fast-perfusion techniques. Cell culture and tissue slice preparations are used as model systems. Research would be integrated with a group of cellular and molecular biologists working on glia. Background in neurophysiology is preferred and experience in patch-clamp recording is required. Laboratory of Cellular and Molecular Neurophysiology (OE-22), NICHD, Building 36, Room 2A21.

Retroviral Oncogenesis **Donald G. Blair, PhD**

A murine retroviral model is used to study the role of the nuclear oncogene *myb* and members of the *ets* gene family in oncogenesis and growth regulation of both hematopoietic and non-hematopoietic cells. Individuals with molecular biology and recombinant DNA experience are sought to utilize retroviral vector systems in the characterization of the oncogenic effects of *myb* and *ets*, and the identification of their cellular targets, and in the study of suppressors of oncogene-mediated transactivation. Laboratory of Molecular Oncology (OE-22), NCI-FCRDC, P.O. Box B, Building 469, Room 117, Frederick MD 21702-1201.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings you may access the NIH EDNET Bulletin Board's POSTDOC conference via modem (1,3014922221 or 1,8003582221). The settings for modem access are "7,Even,1". When connected to NIH, type in "vt100" at the connect message, "F5E" at initial, and "AJLI" at account.

Those interested in receiving information on other postdoctoral opportunities in NIH research laboratories, as well as information on clinical training opportunities, may contact the Office of Education, Building 10, Room 1C129. Phone: 301-496-2427.

To Apply

If you hold a PhD, MD, or equivalent degree and would like to be considered for one of these positions, please send a cover letter, *curriculum vitae*, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



National Institutes Of Health

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POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY/ASSISTANT CURATOR IN INVERTEBRATE ZOOLOGY Harvard University

The Department of Organismic and Evolutionary Biology of Harvard University seeks to make an appointment of a systematist with expertise on a group of living invertebrate organisms other than insects. The candidate will be expected to interact with, and teach, students at the graduate and undergraduate levels and must be willing to accept curatorial responsibilities for part of the collection of invertebrate animals in the Museum of Comparative Zoology.

Applicants should send a statement regarding their research and teaching interests, curriculum vitae, and copies of representative publications by 1 January 1993; three letters of recommendation should also be sent to: **Professor K. J. Boss, Department of Organismic and Evolutionary Biology, 26 Oxford Street, Cambridge, MA 02138.**

Harvard University is an Equal Opportunity/Affirmative Action Employer. We encourage applications from women and minority groups.

FACULTY POSITION

POPULATION OR COMMUNITY ECOLOGIST—The University of Oregon invites applications for a tenure-track faculty position as **ASSISTANT PROFESSOR** in the Department of Biology. The appointment will be in the Ecology and Evolution Group, which has strengths in population and quantitative genetics, evolution, microbial ecology, and conservation biology. Although plant ecology is of special interest, we encourage applications in any area of population or community ecology. We seek candidates whose research combines empirical and experimental ecology with a theoretical, evolutionary, and/or molecular component. Applicants are expected to have a strong record of scientific research and a commitment to excellence in teaching at the undergraduate and graduate levels. Application deadline is January 15, 1993. Applicants should send curriculum vitae with a statement of research interests and selected publications, and have three letters of recommendation sent to: **Ecology Search Committee, Department of Biology, University of Oregon, Eugene, OR 97403.** *The University of Oregon is an Affirmative Action/Equal Opportunity Institution.*

CELLULAR/MOLECULAR NEUROSCIENCE. Two of fourteen state-funded, tenure-track faculty positions are available for appointment at the **ASSISTANT PROFESSOR** level with a start date on or before July 1993 for Scientists with well developed interests in inter- and intra-cellular signalling mechanisms and/or gene expression/regulation in adult or developing nervous systems. Neuroscientists stimulated by the opportunities offered by our integrative focus and collaborative environment in the areas of molecular, behavioral and human cognitive research are encouraged to apply. State-of-the-art laboratories, equipment, library and conference facilities are available in the new Aidekman Research Center on the Rutgers-Newark campus. The Center is in close proximity to (and with joint appointments possible in) the Institute of Animal Behavior and the Departments of Psychology, Chemistry and Biological Sciences at Rutgers, and the New Jersey Medical School. The Newark campus is close to both New York City and attractive New Jersey countryside living. Interested neuroscientists should send curriculum vitae, names of three references and a brief letter of research goals and philosophy to: **Dr. Ian Creese, Center for Molecular & Behavioral Neuroscience, 197 University Avenue, Newark, NJ 07102, USA.** *Rutgers is an Affirmative Action/Equal Opportunity Employer.*

MARINE BIOLOGIST, tenure-track ASSISTANT PROFESSOR beginning August 1993. Successful candidate will teach undergraduate/graduate courses, direct graduate students, and maintain active research program. Preference given to candidates with interests in physiological ecology or evolutionary biology, particularly employing molecular techniques. Ph.D. and postdoctoral experience required. Send curriculum vitae, statement of teaching/research interests, graduate transcript(s), and names of 3 references by 15 January 1993 to: **Dr. Paul E. Hoesier, Department of Biological Sciences, University of North Carolina at Wilmington, Wilmington, NC 28403-3297.** *UNC Wilmington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOLOGY: ASSISTANT PROFESSOR with specialty in plant science, beginning September, 1993. Tenure-track position. Ph.D. required. Primary responsibilities include teaching plant science, nonmajors introductory biology and electives in specialty area; and supervision of plant science laboratory/greenhouse complex in new science facility. Candidate must be willing to develop an undergraduate research program. Send letter of application, résumé, transcripts, and three letters of reference by December 31, 1992 to: **Dr. Robert A. Zaccaria, Chairman, Department of Biology, Lycoming College, Williamsport, PA 17701.**

SCIENCE EDUCATION, LIFE SCIENCE

ASSISTANT PROFESSOR, tenure-track position, September 1, 1993. Doctorate in Biology or Science Education with related background. Teach K-12 teacher education candidates, Biology general-education, and Biology area of expertise. Develop active research program. Application deadline January 15, 1993. Contact: **Dr. Ted Weinheimer, Chair Search Committee, Department of Biology, California State University, 9001 Stockdale Highway, Bakersfield, CA 93311-1099.** *California State University, Bakersfield is an Equal Opportunity, Affirmative Action Employer.*

ASSISTANT PROFESSOR—BIOCHEMISTRY: Continuing position to start August 1993 at small, public, liberal arts honors college, 68 miles southeast of Washington, D.C. Applicants must have a Ph.D. in chemistry or biochemistry with a B.S./B.A. in chemistry preferred, and be committed to undergraduate teaching. Teaching responsibilities include biochemistry and related areas, organic chemistry, chemistry for non-science majors, and directing undergraduate research. Forward résumé, transcripts, and three letters of reference by January 11, 1993 to: **Dr. A. Hovland, Biochemist Search Committee, St. Mary's College of Maryland, St. Mary's City, MD 20686.** *St. Mary's College of Maryland is an Equal Opportunity/Affirmative Action Employer.*

*Applications are invited for a tenure-track position at the rank of **ASSISTANT PROFESSOR.** Applicants should be ecologists whose research interests involve plant-animal interactions. Duties include teaching of general botany or zoology, investigative biology, and ecology/environmental biology. Position dependent on state funding. Applications should include curriculum vitae, statements of research interest and teaching philosophy, and names and addresses of three references. Send materials to: **Dr. Luckett V. Davis, Chair, Biology Department, Winthrop University, Rock Hill, SC 29733** by December 1, 1992. *Winthrop University is an Equal Opportunity/Affirmative Action Employer.*

WILDLIFE ECOLOGIST, ASSISTANT PROFESSOR OF BIOLOGY. Tenure-track position. *Starting:* 15 August 1993. *Required:* Ph.D. with an emphasis in wildlife management/applied biostatistics. *Deadline:* 15 January 1993. Submit curriculum vitae, transcripts, a descriptive statement of teaching and research interests; have three current letters of recommendation sent directly to: **Dr. Stan Trauth, Chair, Faculty Search Committee, Department of Biological Sciences, P.O. Box 599, State University, AR 72467-0599.** *Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

MOLECULAR GENETICS

Applications are invited for a tenure-track position at the **ASSISTANT or ASSOCIATE PROFESSOR** level for a promising or proven scholar using molecular genetic techniques to probe gene function in a fungal system. Areas of interest include, but are not limited to, nuclear/cytoplasmic transport, signal transduction, transcriptional and translational regulatory mechanisms, RNA processing and organelle assembly. It is expected that the successful candidate will maintain a vigorous independent research program, extensively interact with existing research groups, and participate in undergraduate and graduate training. Competitive start-up, space and salary support are available. Send curriculum vitae, a statement of research interests, and have letters from at least three references by January 10, 1993, sent to: **Molecular Genetics Search Committee, T.H. Morgan School of Biological Sciences, 101 Morgan Building, University of Kentucky, Lexington, KY 40506-0225.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FUNCTIONAL MORPHOLOGY/ BIOMECHANICS

The Department of Biology at Wake Forest University invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. *We especially invite applications from minority candidates.* Required qualifications include a Ph.D. with training and experience in the area of functional morphology. The successful candidate will be expected to establish a strong research program, to participate in the training of graduate students, and to develop a course in his/her specialty. Teaching in the departmental core curriculum is expected. Because we are concerned with excellence in teaching, as well as research, please include a statement on both teaching and research interests together with curriculum vitae. Application materials and three letters of recommendation should be sent to: **Dr. R. E. Kuhn, Search Committee, P.O. Box 7325, Wake Forest University, Winston-Salem, NC 27109.** Applications must be received by 1 January 1993. *Wake Forest University is an Equal Opportunity Employer.*


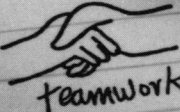

FACULTY POSITION, Molecular Biology of Infectious Diseases. The Department of Microbiology at Colorado State University invites applications for a tenure-track **ASSISTANT or ASSOCIATE PROFESSOR** position to address the molecular biology of infectious diseases. Host-parasite interactions, with particular regard to basic mechanisms of pathogenesis by bacteria, viruses, or other parasitic microorganisms are areas of research interest appropriate to this position. Candidates should possess the Ph.D., D.V.M./Ph.D., M.D./Ph.D. or equivalent degree, and postdoctoral research experience in the biomedical sciences. The successful applicant will be expected to establish an independent research program, and participate in the teaching of undergraduate and graduate courses within the Department and the College. There will be ample opportunity to interact with faculty and students in our nationally recognized programs such as those concerning mycobacteria and arthropod-borne infectious diseases. Applicants should send curriculum vitae, a statement of research interests, and a list of at least three references, to: **Dr. Ian Orme, Search Committee Chairman, Department of Microbiology, Colorado State University, Fort Collins, CO 80523, Telephone: 303-491-5777** by December 31, 1992.



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

MARINE COMMUNITY ECOLOGIST. The Department of Biological Sciences, University of California, Santa Barbara, invites applications for a tenure-track position, at the **ASSISTANT or ASSOCIATE PROFESSOR** level, in Marine Community Ecology, effective 1 July 1993. Ph.D. required by time of appointment. The successful candidate will be expected to establish a strong research program involving developing and testing hypotheses concerning the structure and dynamics of marine communities or biological interactions among marine organisms. He/she will be required to contribute to undergraduate teaching in ecology and marine biology, and to teach and supervise students in the Department's outstanding graduate program in marine ecology. To apply, submit curriculum vitae and a summary of research and teaching goals, and arrange to have three letters of recommendation sent to: **Chair, Department of Biological Sciences, University of California, Santa Barbara, CA 93106,** by 31 December 1992. *The University of California is an Equal Opportunity-Affirmative Action Employer.*

David T. McLaughlin DISTINGUISHED PROFESSORSHIP in Cognitive Science or Cognitive Neuroscience. Dartmouth College seeks a distinguished individual for this professorship. The appointment will most likely be made at the tenured, full professor level in the Department of Psychology, which has both undergraduate and doctoral programs; however, the appointee would be expected to foster interactions with other research groups in Arts and Sciences, engineering and medicine, such as those in computer science and engineering, signal processing, neurosurgery and molecular neuroscience. Nominations and applications should be sent to the following address: **P. Bruce Pipes, Associate Provost for Academic Affairs, Dartmouth College, 6004 Parkhurst Hall, Room 204, Hanover, NH 03755-3529.** Formal consideration of candidates will begin February 1, 1993. *An Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.*

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Our rapidly expanding Drug Metabolism Department is currently seeking highly motivated PhD Research Scientists and BS/MS Research Assistants.

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Research Scientists, PhD—You will interact in a project area with a multidisciplinary team including chemists, biologists and clinicians where pharmacokinetics and drug metabolism input is essential to the discovery and development of new drugs. Additionally, you will work with some of the most advanced equipment and support systems available. Publication of original research encouraged.

Requires a PhD in Pharmacology, Biochemistry, Pharmaceutical Chemistry or Pharmacokinetics, preferably with postdoctoral training or previous experience. Practical experience with bioanalytical methods and biotransformation of drugs is highly desirable. Working knowledge of pharmacokinetics and drug transformation is preferred. Must be highly creative and possess superior interpersonal and communication skills.

Research Assistants, BS/MS—You will participate in drug discovery and development by investigating the pharmacokinetics and *in vivo* and *in vitro* metabolism of new pharmaceutical candidates. Advanced analytical and biochemical techniques will be used in your research.

Requires a BS/MS in biological or chemical science and an interest in the *in vivo/in vitro* metabolism and disposition of drugs. Relevant experience in the development of quantitative analytical methods for drugs in biological matrices, pharmacokinetics, metabolite isolation and identification, and electronic data handling is highly desirable.

We offer competitive salaries and a full range of benefits including medical and dental insurance, paid holidays and vacation, educational assistance, savings and investment plan, pension plan, relocation assistance and more. To learn how you can be a part of the future of Pfizer, send your resume to: **Dr. Ken R. Harewood, Manager, Employee Resources, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.** An equal opportunity employer.



Central Research

The elements of success.

MDC

MAX-DELBRÜCK-CENTRUM
FÜR MOLEKULARE MEDIZIN
BERLIN-BUCH

In January 1992 a new national research center, the Max-Delbrück-Center for Molecular Medicine (MDC), was founded in Berlin-Buch. Close cooperation between basic sciences and clinical research has been established between the MDC and the Franz-Volhard Clinic for Cardiovascular Medicine and the Robert-Rössle Cancer Research Clinic, both integral parts of the Free University of Berlin.

The new center will focus on the following areas:

- **Molecular genetics of the cardiovascular system and cancer, genome analysis**
- **Molecular epidemiology in cardiovascular and cancer research**
- **Biomathematics, statistics, and gene data library**
- **Cell biology (developmental biology, cell growth regulation, protein transport, enzymology)**
- **Experimental and molecular research in cardiology, hypertension, and nephrology**
- **Experimental and molecular research in cancer therapy, humoral, and cellular immunotherapy**
- **Cellular and molecular neurosciences**
- **Genetherapy**

Qualified scientists with an established scientific record and a strong interest in cooperative biomedical research are now invited to apply for positions as:

RESEARCH GROUP LEADER (C4, BAT I)

and

ASSOCIATE RESEARCH GROUP LEADER (BAT Ib/Ia)

Interested individuals should submit the usual credentials as well as a detailed description of their research interests within 4 weeks after appearance of this advertisement to:

Detlev Ganten, MD, PhD, Max-Delbrück-Center for Molecular Medicine, Robert-Rössle-Strasse 10, O-1115 Berlin-Buch, Germany.

U.S. Department of Energy
Office of Health and Environmental Research



Human Genome

D I S T I N G U I S H E D Postdoctoral Fellowships

***Research Opportunities in Biology, Chemistry,
Physics, Mathematics, Engineering,
and Information Science***

- Research related to Human Genome Program
- Tenable at various national and university laboratories
- Stipends \$37,500
- Doctoral degree received after May 1, 1990
- U.S. citizens or permanent resident aliens eligible
- Deadline - February 1, 1993
- Information and applications:

Human Genome Postdoctoral Fellowships
Science/Engineering Education Division
Oak Ridge Institute for Science and Education
P.O. Box 117
Oak Ridge, Tennessee 37831-0117
(615) 576-9975

CALIFORNIA INSTITUTE OF TECHNOLOGY

James Boswell Postdoctoral Fellowship

The California Institute of Technology and The Huntington Medical Research Institutes announce the availability of a James Boswell Postdoctoral Fellowship at the California Institute of Technology for the 1993-94 academic year. This one-year fellowship is open to men and women who have recently received their doctorate in biological and medical science fields of interest to faculty members at Caltech and HMRI. The Boswell fellowship provides an annual stipend of \$28,000 and includes reimbursement of one-way airfare for the fellow to Caltech. Fellows are eligible to participate in Caltech's health and dental program.

Application should include a letter outlining specific field of research and a curriculum vitae. Three letters of reference should be submitted directly. All correspondence should be addressed to:

James Boswell Postdoctoral Fellowship Committee
California Institute of Technology
Mail Code 210-31
Pasadena, California 91125

Completed applications with references should arrive at Caltech before January 31, 1993.

Human Genome Sciences

Human Genome Sciences, Inc. (HGS) is a new biopharmaceutical company engaged in the discovery and development of gene/protein-based pharmaceuticals and diagnostic markers for human disease. Research efforts will be achieved through the application of state-of-the art cDNA sequence analysis, gene mapping, computational biology and gene expression. HGS scientists will work in a collaborative environment with its sister organization, The Institute for Genomic Research, a new, not-for-profit research center devoted to accelerating the sequencing, mapping and functional characterization of human, animal and plant genomes. The initial research efforts at HGS will lie within the areas of **Hematopoiesis, Inflammation, Cancer Biology and Neurodegenerative Disease**. We are currently seeking to fill the following openings:

•• Molecular Biology ••

Research Scientists/Research Associates/Post Doctoral Fellows

Develop new approaches towards cDNA library construction, rapid isolation and characterization of full length cDNA clones and functional analysis of gene products through protein expression. Applicants should have a background in one of the research areas and have expertise in molecular biology and biochemistry.

•• Gene Expression & Protein Purification ••

Director/Research Scientists/Post Doctoral Fellows/Research Associates

Develop rapid methods for expression and purification of recombinant proteins from cDNAs. Experience in one of the research areas is preferred. The ideal applicant should possess broad base skills and have familiarity with prokaryotic, mammalian and baculovirus gene expression systems.

•• Cell Biology ••

Director/Research Scientists/Research Associates

Development of improved cell lines and assay systems within one of the research areas. Expertise in developmental biology and experience with in situ hybridization preferred. Preference will be given to applicants with knowledge in one of the following areas: receptor biology, signal transduction, protein kinases and phosphatases.

•• Physiology/Immunology ••

Research Scientists/Research Associates/ Post Doctoral Fellows

Determine the physiological and immunological clinical relevance of newly identified gene products. Several projects will involve monoclonal antibody technology.

•• Computational Biology ••

Research Scientists/Postdoctoral Fellows

Develop methods, algorithms, and software for data analysis and management, laboratory robotics and interactive simulation and design. Experience in comparative sequence analysis, structure and function prediction is preferred.

Directors: Requires PhD/MD and a minimum of 8-10 years experience, a record of independent scientific leadership and accomplishments, supervisory background and excellent communication skills.

Research Scientists: Requires PhD/MD and 3+ years postdoctoral training.

Research Associates: Requires BS/MS and experience in molecular or cellular biology.

In addition to a stimulating research environment, we offer a competitive compensation and benefits package and the amenities of both the metropolitan DC area and Maryland. Qualified applicants are encouraged to send a curriculum vitae and letter indicating position of interest to :

**Human Genome Sciences, Inc.
Human Resources Department
9620 Medical Center Drive
Rockville MD 20850
Fax #: (301) 309-8512**

HGS is an Equal Opportunity Employer

POSITIONS OPEN

BIOLOGY. Animal Physiologist. **ASSISTANT PROFESSOR.** Tenure-track, begins August, 1993. Teach: animal physiology, introductory zoology, and advanced course in specialty. Required: Ph.D. Preferred: record of effective teaching, collaborative research project involving students. *Women, minority candidates encouraged to apply.* Review of applications starts December 15, 1992. Send letter, résumé, letters of three references, transcripts to: **Dr. George C. Boone, Susquehanna University, Selinsgrove, PA 17870-1001.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR

One Long-term-track Faculty Position. Begin August 1993. Ph.D. required, teaching experience—**GENETICS/CELL BIOLOGY.** Expected to teach Upper and Lower Division courses and conduct Research with undergraduate Biology Majors along with innovative Non-Science Course Development. Experience in small college setting preferred. Liberal Arts Environment. Some possibilities of Graduate Teaching. Position 1.

ASSISTANT/ASSOCIATE PROFESSOR

One Long-term-track Faculty Position. Begin August 1993. Ph.D. required, some teaching experience—**ANATOMY/PHYSIOLOGY.** Expected to teach Upper and Lower Division courses, and develop innovative Non-Science Courses. Experience in small college setting preferred. Liberal Arts Environment. Possibilities for Graduate Teaching. Position 2.

ANATOMY AND PHYSIOLOGY LABORATORY INSTRUCTOR

One full-time laboratory instructor with responsibilities for laboratory instruction in the above areas. Begin August, 1993. Requirements: Master's/Ph.D. and demonstrated teaching ability. Position 3.

Send letter stating position number, interests, detailed curriculum vitae, transcripts, and three letters of reference due prior to December 15, 1992 to: **Sister John Karen Frei, Dean, School of Natural Sciences, Barry University, Miami Shores, FL 33161.**

The Children's Hospital of Philadelphia and Department of Neuroscience, University of Pennsylvania invite applications for an **ASSOCIATE PROFESSOR or PROFESSOR.** This position is for a Ph.D. or M.D. with an international reputation in developmental neurobiology, independent funding, and skill in training junior investigators. Applications should be to: **D. Pleasure, M.D., Neuroscience Research, Children's Hospital of Philadelphia, Philadelphia, PA 19104.** Please include curriculum vitae, copies of 2 recent publications, and a brief description of current and future research objectives. *We are an Affirmative Action/Equal Opportunity Employer.*

Rutgers University reopens its search for a **SENIOR ECOLOGIST (FULL PROFESSOR)** to direct a major program of ecosystems research and instruction in the New Jersey Pinelands. The position is based at the Camden Campus of Rutgers University and includes being Director of the Division of Pinelands Research in the University-wide Institute of Marine and Coastal Sciences. The applicant must demonstrate abilities to obtain funding, administer research, instruct upper division and graduate courses (one per semester), and work on interdisciplinary projects. Send curriculum vitae and three letters of reference to: **Office of Provost Walter Gordon, Ecologist Search Committee, Rutgers University, Camden, NJ 08102.** Closing date is January 31, 1993, or until position is filled. *Rutgers University is an Affirmative Action/Equal Opportunity Employer.*

The School of Medicine of the Health Sciences Center of the University of Missouri announces a search for the **CHAIR OF THE DEPARTMENT OF MOLECULAR MICROBIOLOGY & IMMUNOLOGY.** Responsibilities include recruitment and retention of faculty, education of medical students, training of graduate students and fellows, and strengthening of research.

The position is to be filled by July 1, 1993 and requires an individual of high energy and creativity who has a productive record of academic accomplishments in modern molecular basic science. *Applications from minorities and females are particularly welcomed.* Direct inquiries to: **Herbert S. Goldberg, Ph.D., Associate Dean for Research & Academic Affairs, University of Missouri School of Medicine, MA204 Medical Sciences Building, Columbia, MO 65212.**

POSITIONS OPEN

CALIFORNIA STATE UNIVERSITY, FULLERTON (CSUF) SCIENCE/SCIENCE EDUCATION

The School of Natural Science and Mathematics (SNSM) at California State University, Fullerton announces an opening for a tenure-track faculty position, beginning Fall 1993, at the rank of **ASSOCIATE or FULL PROFESSOR** in the area of **Science/Science Education.** This faculty member will be home-based in one of the science departments: Biological Science, Chemistry/Biochemistry, Geological Sciences or Physics and is expected to direct the recently created Center for Excellence in Science and Mathematics Education (CESME). The applicants must have a consistent record of funded, major science education research projects. Other qualifications include a Ph.D. in a discipline of science or science education; extensive undergraduate and/or graduate teaching experience; as well as significant publications and scholarly activities. Some administrative experience preferred. Applications and supporting materials, which should include names and addresses of three references, should be sent to: **Dr. Marvin J. Rosenberg, Associate Dean, SNSM, California State University, Fullerton, McCarthy Hall Room 166, Fullerton, CA 92634.** Review of applications will start on January 29, 1993 and will continue until the position is filled. *CSUF is an Equal Opportunity/Affirmative Action Employer.*

The Asian Biodiversity Conservation Network (ABCN), a new USAID-funded program, seeks to demonstrate that development of commercial benefits from biological resources can lead to improved biodiversity in Asia and the Pacific. ABCN seeks to hire a **DIRECTOR** (minimum of eight years of experience in biological conservation, natural resource management, international development, or private sector development), **SENIOR PROGRAM OFFICER** (minimum of three years of experience in same fields, and Master's degree), and **PROGRAM ADMINISTRATOR** (minimum of B.S. with five years of experience or M.S. with one year of experience in business administration).

Competitive salary and benefits appropriate to U.S. non-profit sector will be provided. Send cover letter and résumé to: **WWF, Human Resources, Department 261F, By mail: 1250 24th Street, N.W., Washington, D.C. 20037.** Or by FAX: 202-293-9211. *Affirmative Action/Equal Opportunity Employer.*

DIRECTOR BAMFIELD MARINE STATION

The Station is located in a fishing community on the west coast of Vancouver Island, British Columbia, in an area of unspoiled natural beauty and with access to a rich marine fauna and flora. Operated by a consortium of five western Canadian universities on a year-round basis and with a permanent staff of 15, it offers undergraduate and graduate level courses and serves as a base for visiting researchers. The Director must have administrative experience, a commitment to marine science education and a strong, ongoing, research record in an area of biology for which the station offers an appropriate base. Appointment will be for an initial five years (renewable) at a salary and rank commensurate with qualifications and experience. Tenure at one of the member universities is negotiable. Closing date for applications is February 1, 1993, the appointment to take effect July 1, 1993. Applications including curriculum vitae, publications list and names of three referees should be sent to: **Dr. George Mackie, Biology Department, University of Victoria, Victoria, B.C., Canada, V8W 2Y2.**

In accordance with Canadian immigration requirements, the search will focus in the first instance on Canadian citizens and permanent residents of Canada but others may apply. The member universities are committed to employment equity.

TECHNOLOGY PROGRAM MANAGER: To develop and direct comprehensive technology exhibition program, including 20,000 square feet of new exhibits. Requirements include possession of an earned doctorate in industrial education, physics, computer science or a related field; three years of teaching experience; and one year of administrative or supervisory experience. Salary \$54,696 to \$60,300 per year. Send résumé by January 15, 1993 to: **Ann M. Muscat, Ph.D., Deputy Director, California Museum of Science and Industry, 700 State Drive, Los Angeles, CA 90037.** *Equal Opportunity Employer.*

POSITIONS OPEN

DIRECTOR/RESEARCHER Exercise Physiology—Nutritional Biochemistry

Applications are invited for an individual to head a new private research institute within the athletic department of a major southern university. Responsibilities include the design and development of methods for testing nutritional ergogenic aids for athletes, analyzing nutrient effects on endurance, performance, injury rate and rehabilitation. Additional responsibilities involve the coordination of University and local, private resources to develop expertise in all aspects of personal performance and optimization, including all technologies presently in existence as well as development of future ones. Salary commensurate with experience. Send résumé, cover letter in your own handwriting and current photograph to: **Box 26, Science Magazine, Suite 814 1333 H Street, NW, Washington, DC 20005.**

World Wildlife Fund (WWF) works in the U.S. and in 70 other countries to preserve important wildlife resources, promote more sustainable approaches to development, and to reduce pollution and the waste of resources. The **DIRECTOR** of Hispanic South America (HSA), based in Washington, D.C., will plan and execute all activities of HSA program and will review and oversee all appropriate fundraising activities.

Qualifications: 10 years of experience in Latin America in biological conservation or related field, Ph.D. in biological sciences required. Experience in networking in region, Spanish and English, required. Send cover letter and résumé to: **WWF, Attention: Human Resources Department 235F, 1250 24th Street, N.W., Washington, D.C. 20037,** or FAX: 202-293-9211. *Affirmative Action/Equal Opportunity Employer.*

MANAGER

Molecular Evolution Multi-User Laboratories

The Smithsonian Tropical Research Institute, located in the Republic of Panama, seeks a manager for the multi-user laboratories associated with the molecular evolution program, beginning 1 January 1993. M.S. degree, 3 years of graduate education, or comparable specialized experience required. Applicants should have documented abilities in laboratory administration, radiation safety, and in research using a variety of taxonomic groups, molecular techniques and methods of data analysis. Must train and collaborate with visitors and resident staff varying widely in scientific and linguistic background. The successful candidate will be a federal employee (GS-11) and be a part of an established program whose purpose is to bring modern biochemical methods to the study of diverse tropical biotas. If applying from the United States, send curriculum vitae and three confidential letters of recommendation to: **Personnel Management Specialist, Smithsonian Tropical Research Institute, Unit 0948, APO AA 34002-0948.** If applying from other parts of the world, the address is: **P.O. Box 3353, Balboa, Republic of Panama.** Review of applications will begin 1 December 1992 and continue until position is filled. *Equal Opportunity Employer. Employment not limited to U.S. citizens.*

CELLULAR/DEVELOPMENTAL BIOLOGIST

The Department of Biological Sciences at Stanford University invites applications for a **TENURE-TRACK FACULTY** position. Applications will be considered at either the junior or the senior level. Research areas of special interest include cell cycle control, cytoskeleton structure and assembly, protein trafficking, embryonic induction, pattern formation and cell/cell interactions. Research on any organism (vertebrate, invertebrate, plant or bacterial) is appropriate. The successful candidate should have a sincere interest in teaching and will be expected to participate in undergraduate and graduate courses. *Applications from women and minority candidates are strongly encouraged.* Applicants should send curriculum vitae, a letter summarizing accomplishments and goals for research and teaching, selected reprints, and the names and addresses of three to five references before January 15, 1993 to: **Chair, Cellular/Developmental Search Committee, Department of Biological Sciences, Gilbert Building, Stanford University, Stanford, CA 94305-5020.** *Stanford University is an Equal Opportunity/Affirmative Action Employer.*

Chairman and Professor, Cardiothoracic Surgery

*Tufts University School of
Medicine/New England Medical
Center Hospitals*

Applications are invited for the position of Professor and Head, Division of Cardiothoracic Surgery, Tufts University School of Medicine, and Chairman, Department of Cardiothoracic Surgery, New England Medical Center Hospitals. We seek a candidate with the highest academic credentials who will be able to direct a vigorous multi-faceted department in an expanding academic Medical Center and leading Medical School.

Please send your curriculum vitae and supporting information to Deeb N. Salem, M.D., Chief, Cardiology Division, Department of Medicine, New England Medical Center Hospitals and Tufts University School of Medicine, 750 Washington Street, NEMC #79, Boston, MA 02111-1845. An Equal Opportunity Employer.



New England Medical Center

Senior Scientists/M.D.s/Postdoctoral Fellows/ Research Associates

NeXagen Inc. is pioneering the development of new therapeutics based on *in vitro* evolution of nucleic acid structures. NeXagen has developed SELEX technology which permits sampling of large tracts of sequence space for conformations with high affinities and specificities for clinically relevant targets. For one recent description of the use of this technology, see Tuerk et al. PNAS 89: 6988-6992, 1992.

NeXagen seeks **Senior Scientists** with expertise in one of the following areas:

Inflammation
Virology/Infectious diseases
Cancer, hormones and growth factors
Cardiovascular biochemistry
Pharmacokinetics/Drug Delivery

Senior Scientists will undertake research efforts to create therapeutics based on SELEX and associated technologies. We seek individuals with Ph.D. degrees who have demonstrated the ability to innovate, are excited about doing experiments with their own hands, and have the intensity and desire to contribute to the application of a fundamental new concept in drug development.

NeXagen seeks unusual **Individuals with M.D. degrees** who have a combination of extensive, multidisciplinary clinical experience, research interests in biochemistry, and who are excited about the prospects of thinking hard about the application of SELEX technology to the clinic.

NeXagen is initiating a **Postdoctoral Fellow Program** and seeks recent Ph.D. recipients who have demonstrated the ability to undertake and solve difficult experimental problems. Applicants should have solid publication records and will be encouraged to publish work undertaken at NeXagen.

NeXagen seeks motivated **Research Associates** with B.S. or M.S. degrees with relevant laboratory experience in nucleic acid biochemistry or synthetic organic chemistry.

NeXagen is located in Boulder, Colorado, an area known for its physical beauty and cultural breadth. NeXagen enjoys many contacts with the University of Colorado, a center for research in RNA structure and function. Candidates should send CVs and names of three references to: **Personnel Director, NeXagen, Inc., 2860 Wilderness Place, Suite 200, Boulder, CO 80301.**

NEXAGEN

Programmer

Cambridge, MA

Nissan has established its new **Cambridge Basic Research** facility in **Cambridge, MA**. This new research facility will be engaged in studies of visual perceptions that relate to driving.

We are currently seeking an individual familiar with Graphics workstations who can help create dynamic visual displays suitable for exploring the perceptions of time to impact, assessment of search tasks and cognitive loads on driving skills, collision avoidance of unexpected obstacles or pedestrians, etc. In addition, some networking and system development skills are desirable. Research experience is preferred.

Temporary assignments will be for 2-3 years, renewable. **Nissan Research & Development, Inc.** is the North American automotive development arm of Nissan Motor Co., LTD. Please forward resume and salary requirements to our North American Corporate Headquarters by **January 1993**:

Nissan Research & Development, Inc., Human Resources-DN, P.O. Box 9200, Farmington Hills, MI 48333-9200. Equal Opportunity Employer.



NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES NATIONAL INSTITUTES OF HEALTH

INTERDISCIPLINARY SCIENTIST

A vacancy exists for an extramural Program Officer in the Drug Development Section, Developmental Therapeutics Branch, Division of AIDS, NIAID. This Branch is responsible for the discovery and development of AID therapies using a portfolio of grants, cooperative agreements, and contracts. The Drug Development Section is responsible for compound acquisition, chemical tracking, literature surveillance, *in vitro* confirmatory testing, synthesis and formulation of experimental drugs, and toxicology/pharmacokinetic testing in large and small animals. Incumbent will function as a contract or grant project officer and will also be involved with Branch administrative and program responsibilities. Position requires advanced degree, or relevant experience with government contracts/grants, and U.S. citizenship. Salary commensurate with experience beginning at \$46,210 (GS-13/14).

Send curriculum vitae and Application for Federal Employment (SF-171) to:

Dr. Chuck Litterst
Developmental Therapeutics Branch
DAIDS, NIAID
Solar Building, Room 2C13
6003 Executive Blvd.
Bethesda, MD 20892
(301)496-0636.



NIH is an Equal Opportunity Employer

POSITIONS OPEN

FACULTY POSITION WASHINGTON, D.C.

Applications are invited for a **Tenure-Track Faculty Position in The Department of Biochemistry and Molecular Biology of The George Washington University School of Medicine and Health Sciences, Washington, D.C.** The level of the appointment will be commensurate with background and experience. The successful candidate will be expected to have a Ph.D. or M.D. degree and an established research program and scholarly publications in the application of cell biology or molecular genetics to problems of human disease. Areas of interdisciplinary emphasis include cancer, cardiovascular disease, neurosciences and emergency medicine. A complete curriculum vitae listing publications, research support and teaching experience, together with the names of three references should be sent to the address below.

Dr. J.M. Bailey

**Chairman, Faculty Search Committee,
Department of Biochemistry and Molecular Biology
The George Washington University School of
Medicine and Health Sciences,
2300 Eye Street, N.W.
Washington, D.C. 20037**

Review of applications will begin December 1, 1992 and continue until the position is filled. *The George Washington University is an Equal Opportunity/Affirmative Action Employer.*

The Department of Biology, University of St. Thomas, invites applications for **THREE FULL-TIME FACULTY POSITIONS**: (1) A tenure-track position, with responsibility for developing and teaching innovative courses, including some interdisciplinary courses, for non-majors; and for establishing and participating in outreach programs with local elementary and secondary schools, with emphasis on attracting women and under-represented minority students to the study of science. (2) A limited-term position, to teach portions of two introductory majors courses, one in ecology and organismal diversity, the other in genetics and evolution; an intermediate-level course in botany; and an advanced course in plant physiology or other botanical specialty. (3) A limited-term position, to teach courses in comparative vertebrate anatomy and neurobiology, and some laboratory sections for the introductory courses identified above (with position 2). Appointments will become effective September 1, 1993, and will be made at levels commensurate with the successful candidates' experience. St. Thomas is a coeducational, Catholic liberal arts college committed to the total development of the individual student. The successful candidates will have a Ph.D. and a strong commitment to teaching at the undergraduate level and in a liberal-arts context. Postdoctoral teaching experience is preferred. Requested application materials include: a letter of application clearly identifying the position sought and explicitly addressing its needs; a brief statement of teaching objectives and philosophy; curriculum vitae; and three letters of recommendation. These should be sent directly to: **Ms. Carol Felton, Science Division Coordinator, Mail #4050, University of St. Thomas, 2115 Summit Avenue, St. Paul, MN 55105-1096.** All materials must be received by 31 December 1992. *The University of St. Thomas is an Equal Opportunity/Affirmative Action Employer.*

THE CHEMISTRY DEPARTMENT AT THE UNIVERSITY OF CALIFORNIA, BERKELEY, solicits applications for a position of Lecturer/Academic Coordinator for Freshman chemistry, beginning January 1, 1993. Responsibilities include teaching and organizational aspects of the Freshman Chemistry Programs such as teaching assistant training and coordination, development of innovative laboratory experiments, and leading discussion sections. Proven ability to work with others to advance excellence in undergraduate education is required. Ph.D. in any field of chemistry required. Candidates should send curriculum vitae and arrange to have three letters of recommendation sent to: **Chairman, Recruiting Committee, Department of Chemistry, University of California, Berkeley, CA 94720.** The deadline for receipt of applications is December 15, 1992, and appointments are subject to budgetary approval. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

CHEMISTRY FACULTY: The Department of Biology and Chemistry of Lake Superior State University invites applications for a tenure-track position commencing fall 1993. Applicants should have a Ph.D. in chemistry with strengths in analytical chemistry and instrumental analysis and show evidence of potential excellence in teaching. Interest and experience in environmental chemistry is desirable, but not essential. The position may involve teaching courses in general, analytical, and environmental chemistry, and supervision of undergraduate research projects. Rank and salary commensurate with experience.

Send letter of application, curriculum vitae and arrange to have three letters of recommendation sent by January 4, 1993, to: **Office of Employee Relations, Lake Superior State University, Administration Building, Sault Ste. Marie, MI 49783.**

An Equal Employment Opportunity/Affirmative Action Employer.

TENURE-TRACK BIOLOGIST. Sarah Lawrence College is seeking a broadly trained **MOLECULAR BIOLOGIST** with serious interest in undergraduate teaching. Candidates must have an ability to teach in health-related areas such as genetics/human genetics, physiology, anatomy, immunology, etc., in a liberal arts context. The College emphasizes interdisciplinary teaching in small classes with much individual contact, including the supervision of student projects. An interest in ongoing curricular development is important. Send résumé and three letters of recommendation by January 1, 1993:

**Carol Alia
Department of Biology
Sarah Lawrence College
Bronxville, NY 10708**

Equal Opportunity Employer. Minorities and Women encouraged to apply.

FACULTY RESEARCH POSITION

LABORATORY IMMUNOLOGIST. Tenure-track faculty position (**ASSOCIATE or FULL PROFESSOR**) available in the Division of Hematology/Oncology, Department of Internal Medicine, Wayne State University (WSU). Ph.D. with expertise in cellular cytotoxicity, cytokine research and vaccine research. Work closely with Clinical Investigators in the development and implementation of innovative clinical trials of biologic therapies of cancer. Serve on departmental committees. Lead the development of individual and program project grant applications. Opportunities and responsibilities for teaching at both the graduate and undergraduate levels. Send curriculum vitae and three letters of recommendation to: **Bruce Redman, D.O., Wayne State University, Department of Internal Medicine, Harper Hospital, 3990 John R, 5 Hudson, Detroit, MI 48201.** *WSU is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK POSITION. Junior tenure-track faculty position in environmental toxicology to develop an independent research program, and to teach/advice Environmental-Public Health graduate students. Earned doctorate necessary and preferably at least two years of postdoctoral experience. Send curriculum vitae, a summary of research interests, past research-teaching accomplishments, and future research plans; three publications; and the names, addresses, telephone/FAX numbers of at least three references by January 15, 1993 to: **Dr. Shane Que Hee, Vice Chair, Department of Environmental Health Sciences, UCLA School of Public Health, 10833 Le Conte Avenue, Los Angeles, CA 90024-1772.**

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

POSTDOCTORAL POSITION in protein purification and biochemistry (Ribonucleotide Triphosphate Reductase) available anytime after January 1, 1993. Some background in organic synthetic chemistry and/or enzymatic kinetics is also desirable. Send curriculum vitae, undergraduate and graduate transcripts, proposed starting date and have 3 letters of reference sent by the December 13, 1992 closing date to: **Professor Richard G. Finke, Department of Chemistry, University of Oregon, Eugene, OR 97403.** *Equal Opportunity/Affirmative Action institution committed to cultural diversity.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study the effects of anesthetics on dynamic membrane processes. The project employs a dual-excitation/dual-emission spectrometer with CCD detection capability to assess transmembrane signaling events. A strong background in membrane biophysics, biochemistry or pharmacology is essential. Submit curriculum vitae to: **Dr. Hugh Schieren, Department of Anesthesiology, Jefferson Medical College, Suite G6460, 111 South 11th Street, Philadelphia, PA 19107.**

POSTDOCTORAL POSITION available to study mechanisms of myoclonus. Techniques to include HPLC, receptor binding, microdialysis and electrophysiology. Salary commensurate with experience. Send résumé, letter stating research interests, and names of three references to: **Daniel Truong, M.D., and Rae Matsumoto, Ph.D., Department of Neurology 154 Med Surge I, University of California, Irvine, Irvine, CA 92717-4290.** Refer to position #92-4. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN HIV VIROLOGY—HARVARD MEDICAL SCHOOL

Two positions are available for individuals to pursue studies of the viral and host specified factors which regulate the replication and pathogenesis of HIV-1 and related viruses. Current work encompasses a multidisciplinary approach taking advantage of ready access to extensive clinical reagents and expertise, in addition to the resources of a complete molecular biology lab, including BL3 level tissue culture facilities. Candidates should have experience in molecular biology or virology. Please send curriculum vitae and references to: **Dr. Ernest Terwilliger, Associate Scientist, New England Deaconess Hospital, CRI-5, 194 Pilgrim Road, Boston, MA 02215.**

POSTDOCTORAL POSITION COLUMBIA UNIVERSITY

A postdoctoral position is available immediately to study the mechanism of mutagenesis induced by α -particles and chemicals in mammalian genes. Experience with molecular biology techniques is required. Send curriculum vitae and names of 3 references to: **Dr. D. Grunberger, Institute of Cancer Research, 701 West 168th Street, New York, NY 10032.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION, HARVARD MEDICAL SCHOOL

Available immediately. **Organic Chemist** will synthesize radionuclide carrier molecules as part of a multidisciplinary group examining the diagnostic and therapeutic potential of radionuclides. Salary based on experience (NRSA Guidelines). *Must be a U.S. citizen or permanent resident.* Please contact: **Dr. A.I. Kassis, SWRL, 50 Binney Street, Boston, MA 02115.** Telephone: 617-432-3999. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS INTEGRATIVE PHOTOSYNTHESIS RESEARCH

University of Illinois at Urbana-Champaign

A Department of Energy-funded training program offers postdoctoral opportunities for research into mechanism and integration of all aspects of photosynthesis. Projects cross traditional boundaries of photosynthesis research and encourage training and experience in multiple techniques of biochemistry, biophysics, molecular genetics and physiology. Salary starts at \$24,000 per year, with full benefits. *Only U.S. citizens and permanent residents are eligible.* Send curriculum vitae and names of three references to: **Professor C. A. Wraight, 190 Plant and Animal Biotechnology Laboratory, University of Illinois, 1201 West Gregory Drive, Urbana, IL 61801.** FAX: 217-244-1336. *UIUC is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study the mechanisms of regulation and modulation of GABA_A receptor complex by drugs. Approaches being used include functional studies, measurement of subunit and polypeptide expression. Experience in molecular biology preferred. Send curriculum vitae and three references to: **Dr. Maharaj K. Ticku, Department of Pharmacology, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7764.**

Be Part Of Our Next World Class Breakthrough

Centocor, an international leader in the biopharmaceutical industry, is seeking a Senior Research Scientist to complement its first class Diagnostics R&D staff.

SENIOR RESEARCH SCIENTIST

The successful candidate will exhibit initiative and creativity and will assume broad responsibilities in our Diagnostics research group. In collaboration with fellow scientists, research will be focused on the development, application and evaluation of novel in-vitro analytical procedures. Experience in protein/glycoprotein purification and analysis, evidence of scientific proficiency and a Ph.D. in Biochemistry or a related scientific discipline are required.

Our medical breakthroughs are not all that's world class. We offer a salary commensurate with experience and a comprehensive benefits package along with advancement opportunities. To apply, please send/fax resume with salary requirements to: **Centocor, Human Resources, 200 Great Valley Parkway, Malvern, PA 19355. Fax: 215-651-6330. EOE M/F/D/V.**



Centocor

Specializing in
Monoclonal Antibody Medicine



Challenging Post-Doctoral and Research Assistant Career Opportunities For

MOLECULAR/CELL BIOLOGISTS AND BIOCHEMISTS

We are an independent biomedical research institute located on the North Shore University Hospital campus on Long Island, convenient to New York City and Cold Spring Harbor Labs. We're looking for capable, creative professionals to work alongside noted investigators and become involved with the following projects:

- **AIDS RESEARCH** — As part of the team headed by Dr. Michael Bukrinsky, your study will address the molecular mechanisms of HIV latency and infection of different cell types. Requires experience in virology and cell biology.
- **GENE REGULATION** — Headed by Dr. Richard Currie, this group will study the regulation of gene transcription during adipocyte and B lymphocyte differentiation. Expertise in protein biochemistry is desired.
- **ALZHEIMER'S DISEASE** — Working with Dr. Michael P. Vitek, you'll address the processing of Amyloid Precursor Protein, the role of Beta-Amyloid Peptide, and prevention of neurotoxicity in Alzheimer's Disease. Expertise in protein or biochemistry is desired.

We offer an excellent salary and benefits program, commensurate with experience. For confidential consideration, please forward your "c.v.", with salary requirement and indication of position of interest, to: Human Resources Department-SMCB, The Picower Institute, 350 Community Drive, Manhasset, New York 11030. We are an equal opportunity/affirmative action employer.



**The Picower Institute for
Medical Research**



VACANT RESEARCH APPOINTMENTS 1993

The Royal Society

Applications are invited for about 15 Royal Society University Research Fellowships and four named research fellowships; the Eliz. Challenor, the Howe, the Horace Le Marquand and Dudley Bigg and a Pickering Research Fellowship, tenable in the first instance for five years from 1 October 1993 (or slightly later in the academic year 1993-94). Renewals of three years and then a further two may be possible. The appointments available embrace all branches of science, including agriculture, medicine, mathematics, engineering and technology.

Persons appointed will be paid on the academic and academic-related staff (Lecturer A and B) salary scale which currently runs from £13 611 (age 26) to £23 739 (age 39) plus three additional discretionary points up to £26 526. Starting salaries will be on this scale, with London Allowance where appropriate, and will rise incrementally each year. Annual research expenses (up to £11 000 for 1993-94) will be available together with travel expenses and a contribution to baggage costs for successful applicants from overseas and their families.

Applicants must have a Ph.D. or equivalent research experience. They should be at least 26 but should not have passed their 33rd birthdays by 1 October 1993 although, in exceptional cases, older applicants will be considered. Applicants should propose to hold the fellowship in a university or polytechnic in the United Kingdom. Those already holding substantive posts in those places will not be considered. University Research Fellowships are only open to European Community citizens employed or permanently resident in the United Kingdom.

Application forms and further information, including eligibility criteria and details of the subject areas of the four named fellowships, are available from the Research Appointments Department, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG (Fax 071-930 2170). Closing date 12 February 1993. Application forms are not available after 29 January 1993 and applications arriving after 4 p.m. on 12 February will not be considered.

The Research Centre of an
important French Pharmaceutical
company based in the Paris Region,
is looking for a :

PH.D. Biochemist

For its Division of Metabolic Diseases

The candidate should have a **professional or post-Doctoral experience** in *in vitro* (enzymology, receptor studies) and *in vivo* techniques, as well as a **general knowledge of Biochemistry**. **Experience in molecular and cellular biology** would be considered an advantage.

An ability to **work independently** as well as an ability to **communicate** and **collaborate** with other groups within the Division is indispensable.

A knowledge of French would be an asset.

Please submit a C.V., a photograph and a hand written letter to **PUBLIVAL/11011 - 27 route des Gardes 92190 MEUDON (FRANCE)**



HEALTH SCIENTIST ADMINISTRATORS OFFICE OF RESEARCH INTEGRITY

The newly organized Office of Research Integrity (ORI), Public Health Service (PHS), Department of Health and Human Services (HHS) in the United States Government, invites applications for the positions of Health Scientist Administrator at the GS-13/14 grade level, with a current salary range of \$46,210 to \$70,987 per annum.

The ORI has the primary responsibility for the implementation of PHS policies and procedures regarding research integrity in the extramural and intramural biomedical and behavioral research community. This involves the review, oversight and conduct of investigations of possible allegations of scientific misconduct, as well as prevention and education activities designed to promote integrity in research.

The ORI offers the opportunity for intellectually challenging use of analytical, scientific, and investigatory skills. Scientists with a research and/or research administration background in university, institute, Government, or private research organizations are encouraged to apply.

The complete vacancy announcement which lists the technical qualifications required, and the Application for Federal Employment (SF 171), are available by letter or by telephone call to 301-443-6900. Completed applications must be received no later than November 30, 1992 at the following address:

Office of the Assistant Secretary
for Health Personnel Operations Office
Room 17A-07
5600 Fishers Lane
Rockville, Maryland 20857



PHS is an Equal Opportunity Employer. The Office of the Assistant Secretary for Health is a smoke-free work place. Relocation expenses will not be paid.

The Johns Hopkins University
G.W.C. Whiting School of Engineering

ASSOCIATE DEAN FOR RESEARCH

The G.W.C. Whiting School of Engineering of The Johns Hopkins University invites applications for the position of Associate Dean for Research.

The Associate Dean for Research will work closely with the Dean and the faculty to develop research programs and proposals, including the development of research thrusts and centers and associated large-scale proposals.

This individual will identify and pursue sources of funding, both governmental and industrial. Responsibilities will include interactions with University administration, technology transfer, and approving and signing research proposals. Candidates should possess a Ph.D. in engineering or a related field. Experience in university administration and sponsored research policies and legislation is desirable.

Applicants should submit resume with the names, addresses, and telephone numbers of three professional references to:

Dr. Don P. Giddens, Dean
G.W.C. Whiting School of Engineering
The Johns Hopkins University
3400 N. Charles St.
Baltimore, MD 21218

The Johns Hopkins University is an Equal Opportunity, Affirmative Action Employer.

FACULTY POSITIONS IN PROTEIN CRYSTALLOGRAPHY

In continued development of structural biology at the University of Georgia, Athens, the Department of Biochemistry has two available positions in the area of X-ray crystallography. One appointment can be at any academic rank; the other will be at the level of Assistant Professor. The University is committed to provide considerable resources to establish the facility, which will be located in the new Life Sciences Building. Many opportunities exist for collaboration with faculty members in several departments, programs, and centers. These positions are effective July 1, 1993. Applications received by February 1, 1993, are assured of consideration. Like all positions at the University of Georgia, this position is subject to approval by the Board of Regents of the University System and to budgetary considerations. Please send a letter briefly describing your research interests, curriculum vitae, and the names of three references to: **Dr. J. David Puett, Head, Department of Biochemistry, University of Georgia, Life Sciences Building, Athens, GA 30602-7229.** *The University of Georgia is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMICAL ENDOCRINOLOGIST

A position is available for an Assistant Biochemist (non-tenure earning faculty position) to work in an active laboratory engaged in gonadotropin structure-function relationships, hormone-receptor binding, and transmembrane signaling. Applicants should have experience in molecular and cell biology/endocrinology and some familiarity with protein chemistry. Applications received by January 25, 1993, are assured of consideration. Like all positions at the University of Georgia, this position is subject to approval by the Board of Regents of the University System and to budgetary considerations. Please send a letter briefly describing your research interests, curriculum vitae, and the names of three references to: **Dr. J. David Puett, Head, Department of Biochemistry, University of Georgia, Life Sciences Building, Athens, GA 30602-7229.** *The University of Georgia is an Equal Opportunity/Affirmative Action Employer.*

NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Integrative Biology and Neuroscience (IBN) and Division of Molecular and Cellular Biosciences (MCB) are seeking qualified applicants to serve as Program Directors under the provisions of NSF's Visiting Scientist Program. Since responsibilities include research proposal evaluation, budget development and scientific planning, broad knowledge and specific research accomplishment are key qualifications. The positions are excepted from the competitive civil service and are filled on a one- or two-year rotational/temporary basis. The positions become available periodically and will be filled beginning in the summer or fall, 1993. The current, per annum, salary range is \$54,607 to \$85,500; qualification requirements include the Ph.D. or equivalent experience plus 6 or more years of research experience beyond the Ph.D.

In **IBN**, there are openings in: (1) Neuroscience (four positions); (2) Developmental Mechanisms (one position); and (3) Physiology and Behavior (two positions).

In **MCB**, there are openings in: (1) Cell Biology (one position); (2) Biochemistry/Biophysics (two positions); and (3) Genetics (two positions).

Applicants should send resumes or SF-171, Application for Federal Employment, to: National Science Foundation, Staffing and Classification Branch, Room 202, 1800 G St., NW., Washington, DC 20550. Attn: Catherine Handle.

For further technical information call Dr. Bruce Umminger, Integrative Biology and Neuroscience (202) 357-7905; or, Dr. James H. Brown, Molecular and Cellular Biosciences (202) 357-9400. Hearing impaired individuals should call 202/357-7492.

NSF is an Equal Opportunity Employer.

**Director
Charles Babbage Institute**

**A Center of the History of Information
Processing**

University of Minnesota

The University of Minnesota seeks a Director for its Charles Babbage Institute (CBI). The Director will also hold the Engineering Research Associates, Inc., Land-Grant Chair in the History of Technology. CBI is a contemporary history and archives center which focuses on the history of information processing since 1935. The CBI mission is to conduct historical research and to preserve and make accessible records for use in research.

The role of the director includes leadership in CBI, scholarship and publication, and fund raising. Qualifications include a record of research, teaching, and publication suitable to be appointed as either an Associate or Full Professor in an engineering, mathematics or physical science department of the Institute of Technology and to the graduate faculty of the Program in the History of Science and Technology; administrative experience suitable to direct an institute of the size, quality, and orientation of CBI; ability to work with the community of interest to CBI; and a record of fund raising.

Please submit a nomination or application by the closing date of January 15, 1993 to:

Dr. Walter H. Johnson
Chair, Search Committee for the Director of CBI
Office of the Dean, Institute of Technology
University of Minnesota
117 Pleasant Street SE
Minneapolis, MN 55455

Applications should include curriculum vitae, sample publications, and the names of three individuals as references.

*The University of Minnesota is an equal
opportunity educator and employer.*

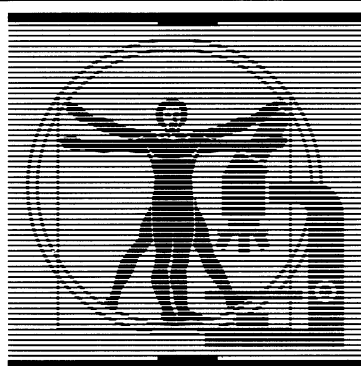
**MOLECULAR BIOLOGIST
ASSISTANT PROFESSOR
THE UNIVERSITY OF MICHIGAN**

The Department of Biology at the University of Michigan solicits applications for a tenure-track position in the general field of Molecular Biology. This individual will join an expanding group of cell and molecular biologists who are part of a large department, with research interests that embrace a wide range of basic biological phenomena. We are interested in individuals who work with either prokaryotic or eukaryotic systems. The specific subfield of interest within molecular biology is of less concern than a record of excellence. Candidates should have a Ph.D., postdoctoral training, a demonstrated record of publication and a strong interest in training undergraduate, graduate, and postdoctoral students. The successful candidate will be expected to develop a strong program of extramurally-funded research and to participate in both the undergraduate and graduate-level teaching programs of the Department. Laboratory and office space has been newly renovated and set-up funds will be available. Applications should include a current C.V., copies of up to five relevant reprints, 3 letters of recommendation, and a brief summary of past research and statement of future research plans. Application material should be sent by January 10, 1993 to:

**Chair, Molecular Biology Search
Committee**

**Department of Biology
University of Michigan
Natural Science Building
Ann Arbor, Michigan 48109-1048**

*The University of Michigan is an Affirmative Action/
Equal Opportunity Employer.
Women and members of minority groups are
strongly encouraged to apply.*



**DISCOVER THE
NCI-FREDERICK
CANCER
RESEARCH &
DEVELOPMENT
CENTER**

**BIOLOGIC DRUG
MANUFACTURING**

The National Cancer Institute's (NCI) Biological Response Modifiers Program is establishing a state-of-the-art Biologic Drug Manufacturing Facility to produce experimental therapeutics for preclinical and clinical trials on breast, colon, prostate and other cancers.

The facility will employ cutting edge technology in mammalian cell bioreactor production of monoclonal antibodies and fermentation reactors for the production of recombinant proteins. Complete class-100 clean rooms, BL-3 containment, fermentation and bioreactor laboratories, biochemistry, conjugate and organic chemistry labs, and QC/QA operations will be included.

The facility will be managed by Program Resources, Inc. (PRI) at the Frederick Cancer Research and Development Center in Frederick, MD.

**SCIENTIFIC
HEAD/MANAGER**

The candidate we seek will be responsible for the overall supervision of the scientific, regulatory and personnel programs under PRI management while conforming to NCI priorities of drug development and manufacturing. All manufacturing will conform to FDA cGMP guidelines for parenteral drug facilities.

This facility is in the initial phases of design. The Scientific Head/Manager will participate in the design and validation of the final concept. Upon completion, the facility will have a laboratory/clerical staff of 17 and will be equipped with the latest scientific equipment.

PhD with demonstrated expertise in biologic drug manufacturing and/or mammalian tissue culture, monoclonal antibody and recombinant protein production of biologic drugs, 3-5 years of related experience and an established reputation of directing and performing scientific programs is desired. Detailed knowledge and direct experience with hybridization, transfection, and establishment of serum-free cell lines producing proteins of clinical interest is essential.

In addition, PRI is seeking a **RESEARCH ASSOCIATE** to supervise at least one technician and the operation of state-of-the-art computer monitored bioreactors for cGMP production of monoclonal antibodies. This lab will eventually compound medium, and determine the optimal bioreactor growth and production conditions for cell lines of interest to the NCI.

MS with experience operating mammalian cell bioreactors for the production of parenteral-grade monoclonal antibodies. Background in cell biology, physiology, immunology or microbiology required. Specific experience in computers for monitoring and reporting data and bioreactor cell line performance desired. Experience with general lab glassware and instrumentation essential.

The working environment provided by the NCI-FCRDC is a campus-like setting in Frederick, MD near Baltimore and Washington, DC. PRI offers a salary commensurate with credentials and an attractive fringe benefits program, including a 401(k) savings plan and relocation assistance.

For consideration, please send resume, references, publication's list, and salary requirements on behalf of the Executive Search Committee to:

**Barbara Norton-Gill,
Technical Recruiter
PROGRAM RESOURCES, INC.
a DynCorp subsidiary
NCI-FCRDC
P.O. Box B
Frederick, MD 21702
EOE, M/F**

POSITIONS OPEN

POSTDOCTORAL POSITIONS FOR TRANSGENIC STUDIES IN CELLULAR AND MOLECULAR NEUROBIOLOGY—The newly established Department of Neurobiology has postdoctoral positions available to study various aspects of molecular, cellular and developmental neurobiology using embryonic stem cell technology and transgenic mice. Some major areas of interest are cell-cell and cell-substratum adhesion molecules, neurite outgrowth and nerve regeneration. Specific studies include: analysis of overexpression, mutation or deletion of adhesion molecules in transgenic mice generated from embryonic stem cells carrying altered adhesion molecule genes; studies of transgenic mice that express adhesion molecules in ectopic locations; analysis of elements that control the expression of adhesion molecules and their subsequent roles in the formation of morphogenetic pathways during neural development. Applicants should have a strong background in cellular and molecular biology and experience with embryonic stem cells or transgenic mice. Send curriculum vitae and three letters of reference to: **Dr. Gerald M. Edelman, Chairman, Department of Neurobiology, The Scripps Research Institute, 10666 North Torrey Pines Road, La Jolla, CA 92037. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION available to study intracellular signaling in B lymphocytes, focusing on relationships between the activity of protein kinases, the function of sequence-specific DNA binding proteins (NF-kappaB, AP-1, CREB), and the expression of immediate-early growth response genes. Background in biochemistry or molecular biology preferred. Send curriculum vitae and the names of 3 referees to: **Thomas L. Rothstein, M.D., Ph.D., Room E-501, Boston University Medical Center/University Hospital, 88 East Newton Street, Boston, MA 02118, Telephone: (617)-638-7002, FAX: (617)-638-7065. Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately to study cell-specific gene expression in mammalian heart and endoderm, focusing on the role of a newly identified transcription factor in differentiation and development. Experience in molecular biology is desirable. Send curriculum vitae and two references to: **Dr. David Wilson, Departments of Molecular Biology-Pharmacology and Pediatrics, Washington University School of Medicine, Box 8116, St. Louis, MO 63110.**

POSTDOCTORAL POSITION IN MAIZE MOLECULAR GENETICS

To study expression of the P gene, a Myb-homologous regulator of flavonoid pigment biosynthesis (*Proc. Natl. Acad. Sci.* 88:4587). Approaches include *in vivo* transposon mutagenesis, and analysis of P promoter/reporter gene fusions introduced into plant tissues by microprojectile bombardment. Experience in molecular biology required. Send curriculum vitae and names of three references to:

**Dr. Thomas Peterson
Cold Spring Harbor Laboratory
P.O. Box 100
Cold Spring Harbor, NY 11724
Equal Opportunity Employer M/F.**

POSTDOCTORAL POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

A position is available for research in eukaryotic protein synthesis and its relationship to cell growth and oncogenesis. One broad area is the mechanism of mRNA binding to ribosomes and how this is affected by initiation factor phosphorylation. A second is the mechanism by which protein synthesis rate is regulated by mitogens, cytokines and proto-oncogenes, especially those that stimulate intracellular phosphorylation pathways. We also are studying the relationship between protein synthesis rate and the growth, phenotype and oncogenic transformation of cells. Candidates must have a recent Ph.D. in biochemistry or a related discipline. Please send curriculum vitae and the names and telephone numbers of three references to: **Dr. Robert E. Rhoads, Professor and Head, Department of Biochemistry and Molecular Biology, LSU Medical Center, 1501 Kings Highway, P.O. Box 33932, Shreveport, LA 71130. LSU is an Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS: CARDIAC MEMBRANE BIOLOGY

Postdoctoral positions available immediately to study the molecular biology and structure/function of cardiac membrane proteins regulating E/C coupling and contractility. Proteins of cardiac sarcolemma and sarcoplasmic reticulum currently investigated include phospholamban, phospholemman, SERCA2, ryanodine receptor, calsequestrin, and second messenger-activated protein kinases. Other channels, pumps, and antiporters also studied. Experience in molecular biology, protein chemistry, and/or single channel electrophysiology desirable. Protein sequencer, nucleic acid and peptide synthesizers, and transgenic animal and monoclonal antibody facilities on site. Send curriculum vitae and names of references to: **Dr. Larry R. Jones, Krannert Institute of Cardiology, Indiana University School of Medicine, 1111 West 10th Street, Indianapolis, IN 46202.**

POSTDOCTORAL POSITION available immediately for a **CELL BIOLOGIST** to produce and test human monoclonal antibodies for growth inhibition of *Plasmodium falciparum*, identify and clone target antigens and prepare recombinant proteins. Position requires some extended periods of stay in France. Prior experience with culturing malaria parasites a plus. Salary is competitive and commensurate with experience. Send curriculum vitae and the names and addresses of three references to: **Theodore F. Taraschi, Ph.D., Thomas Jefferson University, Department of Pathology & Cell Biology, 1020 Locust Street, Philadelphia, PA 19107. FAX: 215-923-2218. Smoke-free environment. Equal Opportunity Employer.**

POSTDOCTORAL POSITION available immediately in laboratory using electrophysiological and pharmacological techniques to investigate the role of the inositol phosphate cascade in vision. Send curriculum vitae and two letters of reference to:

**Alan Fein, Ph.D.
Department of Physiology
University of Connecticut Health Center
Farmington, CT 06030
AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER M/W/H.**

POSTDOCTORAL FELLOWSHIP: MOLECULAR ENDOCRINOLOGY. Position available in a molecular endocrinology laboratory that studies the molecular control of hormone gene expression, with emphasis on pathophysiology of diabetes and neoplastic disease. Current interests include islet transcription factors, the glucagon gene, and parathyroid hormone-related peptide gene. Graduate experience in molecular biology is preferred. Applications to: **Dr. D. Drucker, Toronto General Hospital, 200 Elizabeth Street, Toronto, Ontario, M5G 2C4.**

POSTDOCTORAL RESEARCH ASSOCIATE. Two (2) positions are available immediately to study the immunoregulation of host-tumor interactions during stem cell therapy of metastasis. Experience in molecular, cytokine and cellular immunology required. Curriculum vitae and names of references to: **James Talmadge, Ph.D., University of Nebraska Medical Center, Pathology/Microbiology, 600 South 42nd Street, Omaha, NE 68198-3135. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH POSITION available immediately for studies on fundamental mechanisms of transcriptional activation, using *S. cerevisiae* as a model system. Ph.D. or M.D. required. Experience in molecular and biochemical techniques desirable. Send curriculum vitae and names of three references to: **Shelley Berger, Ph.D., THE WISTAR INSTITUTE, 3601 Spruce Street, Philadelphia, PA 19104. Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE: Ph.D. or M.D. in Immunology. Demonstrated knowledge required of: cellular immunology, biology, biochemistry and molecular genetics. Study the effect of alcohol exposure on the thymus in the mouse and mechanisms of impairment of thymus development induced by ethanol. Experience with cell culture, flow cytometry, lymphokine assays or signal transduction is required. Salary \$24,700 per year. Send résumé to: **Martha Gilliland, Alabama State Employment Service, P.O. Box 2236, Opelika, AL 36803-2236, or apply in person at any Alabama State Employment Service. Job Order Number AL4100743.**

POSITIONS OPEN

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION available for a Ph.D. in Biochemistry/Molecular Biology to investigate the molecular/genetic basis of DNA repair and mutation in mammalian cells using various repair deficient mutants. Experience in gene cloning and DNA sequencing is preferred. We are located in the suburbs just outside of Philadelphia in a newly constructed research center equipped to support state-of-the-art biomedical research. Send curriculum vitae and names of three (3) references to: **Thomas D. Stamato, Ph.D., THE LANKENAU MEDICAL RESEARCH CENTER, 100 Lancaster Avenue West of City Line, Wynnwood, PA 19096, or call (215) 645-3475. A member of the Main Line Health family of hospitals. Equal Opportunity Employer.**

RESEARCH ASSOCIATE, NEUROSCIENCE, CHILDREN'S HOSPITAL/HARVARD MEDICAL SCHOOL: Research Associate position with potential for faculty position available in the Neuroscience Division of the Department of Neurology at Children's Hospital/Harvard Medical School. Laboratory is that of the Chairman of the Department of Neurology. The research is focused on mechanisms of oligodendroglial cell death under conditions of glucose/oxygen deprivation and exposure to excitatory amino acids. Model system is oligodendroglia grown in primary culture. Studies involve a wide variety of biochemical and cell biological techniques. Stimulating intellectual environment in the Longwood Medical Area and Harvard Medical School. Salary competitive and research fully supported. Later development of independent research program at approximately 50% effort is possible and is encouraged. Send letter of application, curriculum vitae and names of three references to:

**Joseph J. Volpe, M.D.
Bronson Crothers Professor of Neurology,
Harvard Medical School
Neurologist-in-Chief
Department of Neurology, Fegan 1103
Children's Hospital
300 Longwood Avenue
Boston, MA 02115**

RESEARCH ASSOCIATE I. Research and publication relating to chemical sensors and the tribology of ultrathin, organized molecular layers using the synthesis and evaluation of polymeric and oligomeric materials, including those that exhibit nonlinear optical properties. Forty hours per week. \$23,000.00 per year. Ph.D. in Electrochemistry required. Send résumé to: **NM Department of Labor, Cost Center 1001, 501 Mountain Road NE, Albuquerque, NM 87102, Job Order No. 426379.**

RESEARCH ASSISTANT, II, Pathology to conduct research into the isolation of probes encoding chromosome transcripts in the search of the primary genetic defect of familial Alzheimer's disease (FAD), utilizing knowledge of extraction of DNA, Southern blot screening of genomic materials, RNA extraction, Northern analysis, microbial growth, purification of plasmid DNA, quantitative and qualitative protein analysis by Western and dot blot analysis, and preparation & maintenance of cell cultures. Said experimental designs include eukaryotic cell cultures, isolation of heteronuclear RNA from mouse-human hybrid cell line, reverse transcription of heteronuclear RNA, construction of a cDNA library from chromosome transcripts, identification of cDNA clones from chromosome and searching for the FAD genetic defect on chromosome 21.

Requirements for the job position are: B.S. degree in Biology or Medical Studies or a foreign degree determined equivalent to a B.S. by a credentials evaluation agency. Six months of experience in the job described, including six months of research experience with extraction of DNA, Southern blot, screening of genomic material, RNA extractions, Northern analysis, microbial growth, purification of plasmid DNA, quantitative and qualitative protein analysis by Western and dot blot analysis, and preparation and maintenance of cell cultures. Must be willing to work with radioisotopes. Applicants to submit résumé and names of three professional references. Work 37.5 hours per week; 8:30 a.m. to 5:00 p.m., Monday to Friday. Salary: \$21,365 per year.

Must have proof of legal authority to work indefinitely in the United States. Send résumé in duplicate (no calls) to: **L. Ellison, JO#1200934, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.**

UNIQUE CAREER CHANGE OPPORTUNITY

Ph.D.s & Doctoral Professionals

The College of Osteopathic Medicine and Surgery in Des Moines, Iowa, offers an accelerated three-year program leading to the Doctor of Osteopathy (D.O.) degree. Doctors of Osteopathy are fully licensed physicians who practice all aspects of medicine in every state.

Your doctoral degree in biological sciences or medical sciences qualifies you to be considered for admission to this accelerated program.

The Graduate Professional Education Program (GPEP) features:

- Three years of didactic and clinical training.
- Significant reduction in total tuition and living costs compared to standard four-year medical programs.
- Financial assistance to qualified students.
- Self-paced learning through independent study.

For more information and an application contact:

**Admissions Office, GPEP Program
University of Osteopathic Medicine
and Health Sciences
3200 Grand Avenue
Des Moines, IA 50312-4198
(515) 271-1450 or 271-1614**



CytoMed ...At the Interface of Inflammation and Immunology

An innovative leader in the development of pharmaceuticals for inflammatory and immune disorders, CytoMed offers exciting career development opportunities with one of biotechnology's fastest growing firms. We seek industry professionals prepared to join a company actively involved in the discovery and development of novel drugs.

■ Pharmacologist

A Ph.D. with extensive post doctoral or industry experience developing in vivo and ex vivo preclinical studies of synthetic compounds or recombinant proteins.

■ Immunologist

A Ph.D. or M.D. degree and 2 or more years' research experience in the area of immunology are preferred, as is experience in the study of regulatory mechanisms that control the immune response to antigens in vitro and in vivo. Experience in complement system and its regulation is a plus.

■ Biochemist

A Ph.D. in Biochemistry or equivalent is required, with post-doctoral or industry experience in ligand-receptor binding and mechanisms of signal transduction preferred.

■ Molecular Biologist

A Ph.D. in Molecular Biology plus a minimum of 2 years' post doctoral or industry experience with a strong background in Mammalian Expression is required.

Work with top minds in your field in a state-of-the-art R&D environment as you advance the course of biotechnology with us. For more information about professional growth at CytoMed—and the competitive salary and comprehensive benefits we provide—send resume in confidence to: HR Specialist, Dept. SCI, CytoMed, Inc., 840 Memorial Drive, Cambridge, MA 02139. An Equal Opportunity Employer.



CytoMed

DARTMOUTH MEDICAL SCHOOL Assistant/Associate Professor Microbiology and Immunology

The Department of Microbiology at Dartmouth Medical School invites applications for a tenure track position to be filled in the 1993 academic year. Areas of research interests include investigations into any aspect of infectious disease pathogenesis (viruses, bacteria, or parasites) preferably using molecular approaches. Qualified candidates must have a Ph.D. and/or M.D. degree and a minimum of two years of postdoctoral research experience. This is a new position in a growing department. The successful applicant is expected to establish an independent research program, to participate in departmental teaching responsibilities, and may join an active Ph.D. degree awarding program. There are opportunities to interact with clinicians and trainees in the Infectious Disease Section of the Department of Medicine, as well as the Norris Cotton Cancer Center. Applicants should send a *curriculum vitae*, a description of research interests, and a list of three references to: The Molecular Pathogenesis Search Committee, Department of Microbiology, Dartmouth Medical School, Hanover, NH, 03755-3842. Dartmouth College is an affirmative action/equal opportunity employer. *Women and minorities are encouraged to apply.*

FACULTY POSITION IN IMMUNOLOGY

Applicants holding the M.D. and/or Ph.D. degree and with interests in cellular/molecular immunology are sought for a tenure track position in the Department of Microbiology at Dartmouth Medical School. Two or more years of postdoctoral research experience is required at the Assistant Professor level, whereas candidates for the Associate Professor level or higher should have an established record of research funding. Duties include establishing or maintaining a strong independent research program, participating in departmental teaching responsibilities, and interacting with the existing faculty in Immunology, Infectious Disease, Rheumatology and/or the Norris Cotton Cancer Center. Participation in an NIH Training Grant in Immunology, a Graduate Ph.D. Program and joint program project grants is expected. Applicants should submit a curriculum vitae, a description of research interests and a list of three references to: The Immunology Search Committee, Program in Immunology, Dartmouth Medical School, 1 Medical Center Drive, Lebanon, NH 03756. Dartmouth College is an affirmative action/equal opportunity employer. *Women and minorities are encouraged to apply.*

DIRECTOR NATIONAL CENTER FOR RESEARCH RESOURCES, NATIONAL INSTITUTES OF HEALTH

The National Center for Research Resources (NCRR) is seeking applicants for the position of Director, National Center for Research Resources. This position is located in Bethesda, Maryland, and is a permanent full-time position with a salary range of \$90,000 to \$112,100 per annum commensurate with qualifications. Physicians may be eligible for Physician Comparability Allowance ranging with \$5,000 to \$20,000 per year.

A recruitment bonus of up to 25 percent of base pay may be available to a non-federal selectee for this position.

A relocation bonus of up to 25 percent of base pay (subject to approval) may be available to a permanent Federal employee who must relocate to accept this position.

The Director, NCRR is responsible for providing leadership and guidance in the development and support of multi-categorical research resources needed for health-related research. Plans, directs, coordinates, and administers the Center's programs to provide the most effective and efficient support for the health research activities of the PHS research institutes and other public and private organizations involved in biomedical research. Applicants for this Senior Executive Service position must have a Doctor of Medicine degree, Doctor of Veterinary Medicine degree or Ph. D. in one of the health sciences (or equivalent combination of experience and training). Send applications to Ms. Pathenia Wiggins, NCRR, 9000 Rockville Pike, Building 31, Room 3B40, Bethesda, MD 20892. For application forms and a copy of the requirements contact Ms. Wiggins at NCRR on (301)496-1524. Deadline for applicants is 11/27/92.

Public Health Service Commissioned Officers interested in performing duties of the position within the Commissioned Corps may submit a resume to the above address.

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Chairman and Professor, Otolaryngology

Tufts University School of Medicine/New England Medical Center Hospitals

Applications are invited for the position of Professor and Head, Division of Otolaryngology, Tufts University School of Medicine, and Chairman, Department of Otolaryngology, New England Medical Center Hospitals. We seek a candidate with the highest academic credentials who will be able to direct a vigorous multifaceted department in an expanding academic Medical Center and leading Medical School.

Please send your curriculum vitae and supporting information to Carmen A. Puliafito, M.D., Chairman, Department of Ophthalmology, New England Medical Center Hospitals and Tufts University School of Medicine, 750 Washington Street, NEMC #450, Boston, MA 02111-1845. An Equal Opportunity Employer.



New England Medical Center

MOLECULAR/CELLULAR BIOLOGIST

Molecular/Cellular Biologist to conduct research on the molecular basis for lung cancer and other health effects of inhaled toxicants. Doctoral degree or equivalent scientific credentials in cellular or molecular biology, tumor biology, molecular toxicology or closely related field with an understanding of radiobiology, and post-doctoral training or relevant experience in the molecular basis for abnormalities in mammalian cells is required. Interests in carcinogenesis and toxicology preferred.

The Inhalation Toxicology Research Institute offers a highly interactive, multi-disciplinary team environment and an opportunity to live and work in the beautiful Southwest.

Please send resume and salary requirements to Human Resources Unit, Inhalation Toxicology Research Institute, P.O. Box 5890, Albuquerque, New Mexico 87185 by December 11, 1992. Refer to Job #118.

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POSITIONS OPEN

ASSOCIATE SCIENTIST AND POSTDOCTORAL POSITIONS

Available in the laboratory of Dr. Kenneth M. Baker to study the molecular and biochemical mechanisms of angiotensin II-mediated cardiac growth and the regulation of expressed angiotensin II receptors. Molecular and biochemical background required.

Send curriculum vitae and the names and addresses of three references to: Geisinger Human Resources Department (KMB), 100 North Academy Avenue, Danville, PA 17822-1529.

RESEARCH ASSOCIATE

University of Texas Southwestern Medical Center at Dallas

Two postdoctoral positions available immediately for talented scientists with an interest in protein engineering. No previous experience in the field is essential but successful applicants should possess a willingness to learn and aggressively exploit both biological and chemical techniques. Projects will involve enzyme design, phage display, and hybrid proteins. Send curriculum vitae and three letters of reference to: Dr. David Corey, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9050. An Equal Opportunity Employer.

LABORATORY COORDINATOR

The College of Science of the University of Notre Dame seeks applicants for a non-tenure-track position as laboratory coordinator for one of two of the following undergraduate courses: (1) Bioorganic Chemistry, (2) an integrated course in Cell Biology and Genetics, and (3) Animal Physiology. Duties will include development of laboratory exercises in conjunction with appropriate faculty, coordination of graduate teaching assistants, and general responsibility for instrumentation and for the running of the laboratories. Applicants should have expertise in modern techniques and teaching experience in at least one, and preferably more, of the listed areas. Minimum of a Master's degree in one of the above fields is required. Position to begin Spring 1993. Applications should include curriculum vitae, undergraduate and graduate transcripts, two letters of reference, and a cover letter detailing the applicant's technical expertise and teaching experience. Please send applications by December 15, 1992 to: Professor John G. Duman, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556. The University of Notre Dame is an Affirmative Action/Equal Opportunity Employer.

SUPERVISORY NEUROSCIENTIST GM-15

To serve as Chief of the Neurotoxicology Branch, Pathophysiology Division, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland. Responsibilities include supervising and managing research on the mechanisms of action of neurotoxic chemical agents and biological toxins of military interest. The goals of these research initiatives are the development of effective pharmacologic pretreatment or therapeutic regimens for soldier use. Qualified applicants should have a background in neurophysiology, neuroanatomy, neuropharmacology, experimental psychology, and neurotoxicology as indicated by peer-reviewed publications. Demonstrated ability in multidisciplinary research program planning and execution is essential. The ideal candidate will have a Ph.D. in one of the basic animal sciences, physiology, pharmacology, psychology, or a closely related discipline. Salary range is \$64,233 to \$83,502 per annum. U.S. citizenship is required and the applicant must be able to obtain a security clearance. Resumes must be received by 31 December 1992. Send to: Commander, U.S. Army Aberdeen Proving Ground, ATTN: STEAP-CP-RT (Ms. D. Jennings), Aberdeen Proving Ground, MD 21005-5001. Equal Opportunity Employer.

SCIENCE recruitment ads reach thousands of scientists in all disciplines, worldwide. Classified Advertising telephone: 202-326-6555. FAX: 202-682-0816.

POSITIONS OPEN

ANESTHESIA SCIENTIST

Application invited for tenure-track or tenured position in the Anesthesiology Department at the University of California at Irvine (UCI) for M.D. and/or Ph.D. Scientist. Candidate must develop and sustain independent program in basic anesthesia research. Opportunities exist for collaborating with established scientists working on molecular or cellular mechanisms in neuroscience, cardiovascular disease, and pharmacology/toxicology. Salary and benefits are commensurate with qualifications and experience. Send curriculum vitae to: David H. Wong, Pharm.D., M.D., Long Beach VA Medical Center, 5901 East 7th Street, Anesthesiology Service (139A), Long Beach, CA 90822.

UCI is an Affirmative Action/Equal Opportunity Employer.

POLYMER CHEMIST

Medical Polymers, Inc. is a fast-growing biomedical R&D company recently relocated to Austin, Texas. The company's technology base includes its proprietary polymer-based drug delivery system. The first product developed from this technology will reach the market in early 1993. Medical Polymers, Inc. intends to become a leader in the creation of a wide variety of polymer-based products for the dental, hospital, pharmaceutical and cosmetic markets.

We are currently seeking a highly motivated individual to join our team and lead the development of our R&D laboratories. Candidates must have a Ph.D. in polymer chemistry, chemical engineering, or related discipline. At least 4 years of postdoctoral experience is required. Industrial experience in the areas of polymer formulations and/or drug delivery chemistry is preferred.

If you are looking for a stimulating and challenging work environment located in an outstanding cultural, educational, and recreational area, send your curriculum vitae to: Dr. Anne Crossway, Medical Polymers, Inc., 8920 Business Park Drive, Suite 290, Austin, TX 78759-7405. We are an Equal Opportunity Employer.

RESEARCH SCIENTIST position available January 1993 to study tissue interactions and gene regulatory events leading to eye formation in *Xenopus laevis* embryos. Experience with surgical manipulations, immunohistochemistry and techniques of molecular biology is highly desirable. Please send curriculum vitae, brief statement of prior research training, and three letters of recommendation to: Dr. Robert M. Grainger, Department of Biology, University of Virginia, Charlottesville, VA 22903-2477. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.

RESEARCH SCIENTIST: 40 hours. 8:00 a.m.-4:30 p.m. Responsible for performing studies on the molecular pathogenesis of *Campylobacter jejuni*. Research will require genetic manipulation of *Campylobacter*, in vitro bacterial invasion systems, and recombinant DNA procedures, including molecular cloning in *E. coli* and *C. jejuni*, DNA sequencing, and antigen detection. Requires Ph.D. in Immunology and Microbiology. 3 years experience in the job offered or 3 years of experience as Instructor/Research Associate in Immunology and Microbiology. Salary \$36,912.00 per year. Mail curriculum vitae to: DEED, 1100 North Eutaw Street, Room 212, Baltimore, MD 21201, J.O. #9149393.

RESEARCH SCIENTIST PHARMACOKINETICS AND TOXICOLOGY

Sugen is a new biopharmaceutical development Company located in the San Francisco Bay Area. Our drug development strategy is based on the identification of novel and proprietary targets for therapeutic intervention with primary emphasis on the tyrosine kinase and phosphatase receptor systems.

We currently have an opening for a Research Scientist in our Preclinical Development Group. Applicants should have a Ph.D. in Pharmacology, Toxicology or related field with 3 to 5 years of experience in preclinical drug development and demonstrated expertise with in vivo pharmacokinetic and drug metabolism studies.

If you are a high level energy individual with a commitment to excellence, we invite you to write to:

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Sugen, Inc.

515 Galveston Drive
Redwood City, CA 94063-4720

SENIOR RESEARCH SCIENTIST

Molecular Biology

At the Medical Research Division of American Cyanamid Company, we're making important strides in developing a new generation of therapeutics based on molecular biology and cell-specific mechanisms. Currently, we are seeking an energetic individual for our Molecular Biology Department to work on projects involving transcription factors and eukaryotic gene expression.

The successful candidate should have a PhD in molecular biology or related field and relevant postdoctoral experience.

We are located on the Lederle Laboratories campus of American Cyanamid in Rockland County, only 25 miles north of New York City. The salary is fully competitive and includes comprehensive benefits. For consideration,

please send your resume to: Dept.

IK, Lederle Laboratories, Bldg. 205, Room 283, Middletown Road, Pearl River, NY 10965.

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In this equity position, you will lead the way in obtaining contracts to commercialize our highly successful Human and Molecular Genetics Division. These contracts will be with pharmaceutical companies and other biotechnical companies and will involve commercialization of leading edge research in the field of human genetics including gene mapping and cloning, DNA sequencing, test development, and genetic testing for clinical trials.

You must have successfully negotiated commercial contracts for scientific research and have extensive knowledge of product trends in the biotechnology and pharmaceutical businesses to formulate and execute alliances with other leading scientific companies. Additionally, you must hold an M.S. or Ph.D. in any of the following areas: Molecular Biology, Biology, Cell Biology, Molecular Genetics, Biochemistry, or Immunology.

At CRI we offer a comprehensive salary and benefits package. Interested candidates should send resume or curriculum vitae to: **Susan Foster, Collaborative Research, Inc., 100 Beaver Street, Waltham, MA 02154.** An Equal Opportunity Employer M/F/H/V

Collaborative Research Incorporated



BIOPHARMACEUTICAL RESEARCH

SmithKline Beecham Pharmaceuticals, a world leader in pharmaceutical research, has exciting opportunities for several scientists to join its Gene Expression Sciences and Macromolecular Sciences research teams.

GENE EXPRESSION SCIENTIST

The selected candidate will clone and express genes encoding novel drug targets or therapeutic proteins and develop microbial-based screens for new drugs.

Requirements for this position include a B.S. in Molecular Biology or a related biological science and 1-5 years experience, or M.S. with 1-2 years experience in recombinant DNA techniques. In addition, the successful candidate will have strong organizational and communication skills and an ability to interact closely with a multidisciplinary team of scientists. (Job #H0530)

POSTDOCTORAL SCIENTIST

As a member of the Gene Expression Sciences research team, the selected candidate will identify, clone and characterize novel genes in the yeast *Saccharomyces cerevisiae* involved in cytoplasmic signal transduction aimed at understanding the mechanism of action of immunosuppressive drugs (see Mol. Cell. Biol. 11:1718, 1991; Gene 108:73, 1991; Gene 111:85, 1992).

Requirements for this position include a Ph.D. in Molecular Biology or a related biological science and a strong background in recombinant DNA techniques (experience in yeast genetics is highly desirable). The candidate also should possess a proven record of scientific achievement as evidenced by publications in major scientific journals. SmithKline Beecham postdoctoral scientists are strongly encouraged to publish research findings. (Job #H0532)

MOLECULAR BIOLOGY SCIENTIST

The selected candidate will design, conduct and interpret experiments in molecular biology aimed at cloning and expression of novel proteins. This position requires a B.S. in Molecular Biology, Genetics or a related field and 3-5 years experience, or an M.S. and 1-3 years experience. The successful candidate should have a background in molecular biology techniques including PCR, DNA sequencing, Western Blotting and Northern and Southern analysis. A background with tissue culture and transfection techniques is desirable. (Job #H0453)

Our state-of-the-art research facility is located in suburban Philadelphia, near Valley Forge, PA. We offer a competitive compensation/benefits/relocation package, as well as a stimulating and challenging work environment. For confidential consideration, please submit your C.V., indicating the appropriate job #, and the names of three references, to: SmithKline Beecham Pharmaceuticals, Senior Employment Administrator, PO Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/D/V.

SB

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MAX-PLANCK-INSTITUTE FOR BIOPHYSICAL CHEMISTRY

Molecular Neurobiologists

Two positions exist in the newly set up research group "Molecular Neurobiology" in the Department of Membrane Biophysics: one for a *research scientist (Bat IIa/Ib)* and one for a *postdoctoral fellow*, starting 1.1.1993 for a period of 5 and 2 years, respectively. The group will study structure function relationships in neurotransmitter receptors, ion channels, and the transduction mechanisms that couple to them. Special interest focuses on the cloning, expression, and functional characterization of novel components in the 7-helix receptor/G protein/ion channel transduction cascade. The candidates will have a PhD in a relevant field plus a track record with solid experience in molecular biology and/or gene expression/transfer for the scientist position.

If you are interested in either of these positions, please call or send your cv with a list of publications and the names of three referees to: **Dr. Andreas Karschin, Max-Planck-Institute for Biophysical Chemistry, Department 140, Am Fassberg, 3400 Göttingen, FRG, Tel. (0551) 201665, Fax. (0551) 201688.**

Research Scientist

Cambridge, MA

Nissan has established its new **Cambridge Basic Research** facility in **Cambridge, MA**. This new research facility will be engaged in basic science studies of factors that might improve driving skills, and driving comfort and safety.

Problems of special interest include cognitive loads, attention and search, optical flow field assessment, navigation, early recognition of dangerous situations, and strategies for improving driver and pedestrian safety. The lab has a close working relationship with faculty at MIT and Harvard, and will house a variety of experimental facilities, including several Graphics workstations.

Temporary assignments will be for 2-3 years, renewable. Ph.D. required. Level of appointment is open. **Nissan Research & Development, Inc.** is the North American automotive development arm of Nissan Motor Co., LTD. Please forward resume and salary requirements to our North American Corporate Headquarters by **January 1993**:

Nissan Research & Development, Inc., Human Resources-DN, P.O. Box 9200, Farmington Hills, MI 48333-9200. Equal Opportunity Employer.



Chairman and Professor, Department of Surgery

*Tufts University School of
Medicine/New England Medical
Center Hospitals*

Applications are invited for the position of Chairman and Professor, Department of Surgery, Tufts University School of Medicine, and Surgeon-in-Chief, Department of Surgery, New England Medical Center Hospitals. We seek a candidate with the highest academic credentials who will be able to direct a vigorous multi-faceted department in an expanding academic Medical Center and leading Medical School.

Please send your curriculum vitae and supporting information to Sheldon M. Wolff, M.D., Chairman, Department of Medicine, New England Medical Center Hospitals and Tufts University School of Medicine, 750 Washington Street, NEMC #312, Boston, MA 02111-1845. An Equal Opportunity Employer.



New England Medical Center

POSITIONS OPEN Science

Swedish Natural Science Research Council (NFR)

invites applications for a research position in *Sequence stratigraphy*. The position may be held at an appropriate earth science research group within Sweden. The position is intended to begin July 1, 1993, and runs for 3 years with a possibility of a prolongation for another 3 years. Salary range corresponding to associate professor (SEK 245,000-325,000 per year). After these years the scientist is entitled to an appointment as a University Lecturer.

Applications should reach the Swedish Natural Science Research Council, Box 6711, S-113 85 Stockholm, Sweden, by January 4, 1993. A curriculum vitae including a list of publications, a short plan for the research the applicant would like to carry out, and at most 10 reprints of scientific papers should be appended to the application. The application and all the supporting documents shall be submitted in four copies.

Further information can be obtained from Mrs. Natalie Lunin at the Secretariat of NFR, phone no +46 8 610 07 56, fax no +46 8 6100740, telex no 13599 RescounS.

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RESEARCH SCIENTIST

Saint Francis Hospital and Medical Center located in Hartford, Connecticut, is seeking candidates to join our Department of Research to establish new programs in cell and vascular biology. Candidates should have completed a doctoral degree and a postdoctoral fellowship and have prior experience in molecular aspects of cell biology. Candidates will be eligible for an appointment at the University of Connecticut School of Medicine. Interested candidates should send resume and references to:

Dr. Ernesto Canalis.



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The Ohio-based Company is seeking a senior scientist with a significant record of scientific achievement and research management. The successful candidate should have a primary research background in cell biology, developmental biology, molecular biology or immunology. A special interest in hematopoiesis would be desirable. Prior pharmaceutical/biotechnology industrial experience is not mandatory. Strong management and organizational skills are essential as is the ability to effectively communicate to scientific and lay audiences.

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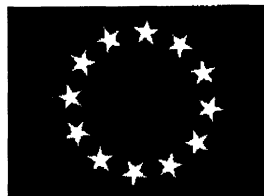
Reply in confidence with C.V. to: **Dr. Glenn L. Cooper, President and Chief Executive Officer, Progenitor Inc., 132 North Woods Boulevard, Columbus, Ohio 43235**

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POSITIONS OPEN

MOLECULAR BEHAVIORAL ECOLOGY. The Huxley Research Instructorship is a 2-year position combining modest teaching and collaborative research, starting anytime before August. Collaborate on studies of kinship and social behavior using DNA microsatellite markers. Molecular experience preferred but not essential. Send curriculum vitae, brief statement of teaching and research interests, and 3 reference letters to: **David Queller, Search Committee, Department of Ecology and Evolutionary Biology, Rice University, P.O. Box 1892, Houston, TX 77251** by December 23, 1992. *Women and minorities are encouraged to apply. Rice University is an Equal Opportunity/Affirmative Action Employer.*

TOXICOLOGISTS

The California Environmental Protection Agency, Department of Pesticide Regulation seeks Staff Toxicologists and Associate Toxicologists in its pesticide regulatory program. Incumbents will evaluate toxicology studies and/or conduct risk assessments. Positions exist for individuals with Master's and/or Doctorate degrees in toxicology, pharmacology, or a closely related field with suitable experience in animal toxicology. Salary ranges begin at \$4378 per month for Staff Toxicologist (minimum, Ph.D. and 3 years of experience) and \$3312 per month for Associate Toxicologist (minimum, M.S. and 4 years of experience or Ph.D.). Comprehensive benefits package. Continuous testing, oral exam required. Submit résumés to:

**Department of Pesticide Regulation
Examinations Unit
1220 N Street, Room 154
Sacramento, CA 95814**

RESEARCH SCIENTISTS MOLECULAR BIOLOGY

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The second position requires a B.S./M.S. or equivalent in Molecular Biology, hands-on experience in DNA transformation methods. Experience in an industrial research or product development laboratory highly desired.

For consideration, send your résumé to: **Bio-Rad Laboratories, Department 468, 2000 Alfred Nobel Drive, Hercules, CA 94547. Equal Opportunity Employer/M/F/D/V.**

BIO-RAD Bio-Rad Laboratories

ANNOUNCEMENTS

UNIVERSITY OF FLORIDA PREDOCTORAL PROGRAM IN CELL BIOLOGY

The Department of Anatomy and Cell Biology offers a newly expanded graduate program leading to a Ph.D. in Cell and Developmental Biology. A young and vigorous faculty lead research programs in a wide range of areas, including nuclear structure and function, the cytoskeleton, cell-cell interactions in development, and protein turnover, secretion, and endocytosis. Experimental approaches include all contemporary interdisciplinary cell biological methods, such as molecular biology, molecular genetics, optical and electron microscopy, cell culture, and immunological methods. A new departmental focus is three-dimensional cellular imaging, including confocal optical microscopy, digital image processing, and computer graphics, which is part of a new Center for Structural Biology. For more information, contact: **Dr. Gudrun Bennett, Graduate Coordinator, Department of Anatomy & Cell Biology, Box 100235, University of Florida, Gainesville, FL 32610-0235 (Telephone: 904-392-3529; FAX: 392-3305).**

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**University of Illinois at Urbana-Champaign
(UIUC)**

Traineeships are available in the Integrative Photosynthesis Research Graduate Training Program, funded by the Department of Energy. The program offers opportunities for research into mechanism and integration of all aspects of photosynthesis, across traditional boundaries of photosynthesis research. Training and experience are provided in multiple techniques of biochemistry, biophysics, molecular genetics and physiology. Traineeships start at \$14,000 per year with full tuition and fee waiver. *Only U.S. citizens and permanent residents are eligible. Women and members of minority groups are encouraged to apply.* For further information write to: **Professor C. A. Wraight, 190 Plant and Animal Biotechnology Laboratory, University of Illinois, 1201 West Gregory Drive, Urbana, IL 61801. FAX: 217-244-1336.**

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MEETINGS

FOURTH NATIONAL PESTICIDE CONFERENCE, New Directions in Pesticide Research, Development, Management, and Policy, November 1-3, 1993, Richmond, Virginia. Abstract Deadline: February 1, 1993. Camera-ready copy for Proceedings due October 1, 1993. Request information from:

**Dr. Diana L. Weigmann
VA Water Resources Research Center
617 North Main Street
Blacksburg, VA 24060-3397
FAX: (703) 231-6673**

SIXTH INTERNATIONAL CONFERENCE ON CARCINOGENESIS AND RISK ASSESSMENT

**Receptor-Mediated Biological Processes:
Implications for Evaluating Carcinogenesis**

December 8-11, 1992

Barton Creek Resort, Austin, Texas

Chairman—Hugh Spitzer,

ILSI Risk Science

Washington, D.C.

Co-chairman—Thomas J. Slaga, Ph.D.

The University of Texas M.D. Anderson Cancer

Center,

Science Park—Research Division,

Smithville, Texas

The adverse responses produced by many environmental chemicals result from interactions with specific cellular receptors. Examples of chemicals acting via receptors include the environmental estrogens, dioxin, phorbol esters, certain PCB isomers and peroxisome proliferating agents and neurotoxins. Many of the basic elements of the receptor pathway, binding (recognition), signal transduction and response, are shared in common by various receptor classes (e.g., membrane, cytosolic, nuclear).

The goal of this conference is to provide a basic understanding of receptor theory and the biology of receptor-mediated processes, with emphasis on both qualitative and quantitative aspects of receptor function. Building on this foundation, other sessions will focus on case studies, development of animal models, and modeling receptor-mediated events. The conference will conclude with a panel discussion on the implications of receptor-mediated processes to human risk assessment.

For more information, contact:

**Karen Campbell-Engel or Mary Lou Fendley
The University of Texas M.D. Anderson Cancer Center
Science Park—Research Division
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Smithville, TX 78957
Telephone: 512-237-2403
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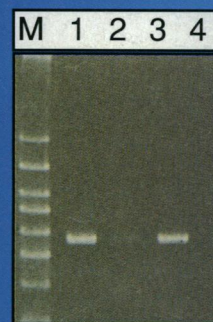
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