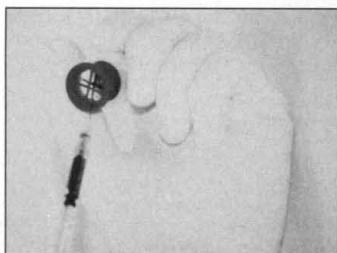


Small-Volume Dialysis

The QuixSep Micro Dialyzer is a low-cost device that makes use of off-the-shelf membranes to dialyze samples too small for dialysis tubing. Equilibration times average 30 min to 1 hour for simple dialysis of salts or buffer exchange. The device is a two-piece capsule that locks a small membrane sheet in place with a push fit. Loaded QuixSep is stirred vigorously in a beaker to accelerate dialysis rate. Membrane and sample are protected from damage by the collar. Sample is quickly removed without disassembling the capsule by puncturing the membrane with a pipette tip or syringe, and directly aspirating the sample. It is available in three maxi-



mum volumes: 0.1, 0.5, and 1.0 ml. **Membrane Filtration Products. Circle 139.**

Chemiluminescent HRP Substrate Kit

The LumiGLO Substrate Kit is a luminol-mediated chemiluminescent substrate system designed for use with horseradish peroxidase (HRP)-labeled antibodies on membranes. Substrate reagents are stable for a full 12 months, and can be used with any basic immunoblotting protocol for enhanced sensitivity over colorimetric assays. **Kirkegaard and Perry Laboratories. Circle 140.**

Fluorescent Cyclic AMP Probe

Cyclic AMP Fluorosensor is the first fluorescent probe for the nondestructive measurement of the signal transduction second messenger, cyclic adenosine

monophosphate (cAMP), in living cells by digital video imaging, confocal microscopy, or photometry. It consists of cAMP-dependent protein kinase A in which murine recombinant catalytic and regulatory subunits are labeled with two different fluorescent dyes. **Atto Instruments. Circle 141.**

Cathodoluminescence Detector

Typically, the weak cathodoluminescence (CL) signals produced in a scanning electron microscope (SEM) require an efficient CL collection and detection system to allow effective CL imaging or spectral analysis. The CL302 has the highest efficiency of any commercially available collector, according to the manufacturer, collecting in excess of 75% of all CL photons emitted by a sample in an SEM. Based on a highly accurate and retractable paraboloidal mirror plus light guide and a vacuum window, it can be mounted onto any SEM port with horizontal access above the sample. Spectral transmission, using standard silica optics, is from 250 nm to 2.5 μm and the unit provides options of up to three outputs—two for detectors and one for a fiber optic bundle for transmission to an external monochromator. The high collection efficiency allows low-electron probe currents to be used, which increases spatial resolution. **Oxford Instruments. Circle 142.**

Personal Thermal Cycler

The GeneAmp PCR System 2400 Personal Thermal Cycler is a high-performance, low-cost polymerase chain reaction (PCR) unit designed to meet the needs

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.



of the individual researcher. It offers temperature uniformity, high-speed, oil-free operation, and unsurpassed reproducibility. It features a graphical user interface that makes programming fast and easy. Users can display program progress in real time and store up to 68 methods. Software options include variable up-ramp speeds, automatic time and temperature increments, programmed pauses, and time-and-date records. **Perkin-Elmer. Circle 143.**

Drug Study Assays

Four cytochrome P450 isoenzyme enzyme-linked immunosorbent assays (ELISAs) and six ^{14}C -labeled cytochrome P450 substrates have been developed in response to the growing emphasis on in vitro metabolism studies for new drug testing. The new ELISAs are useful for determining not only if a drug has induced a particular cytochrome P450 isoform, but also how much induction has occurred. Each ELISA makes use of purified antibodies enabling specific detection of the 1A1, 2B1/2, 3A, and 4A isoforms of cytochrome P450 in rat liver microsomal samples. The ^{14}C -labeled substrates have been selected as being prime indicators of the activity of cytochrome P450 isoforms. **Amer-sham Life Science. Circle 144.**

Lambda Terminase

Lambda Terminase is an endonuclease that recognizes double-stranded DNA at the cos site, re-

sulting in complementary 5' overhangs of 12 bases in length. The enzyme is useful for generating restriction maps of unknown DNA cloned into vectors containing cos sites. It also can be used to increase efficiencies substantially in in vitro lambda packaging systems. In addition, because the enzyme linearizes vectors outside of their insert DNA, it increases the success rate of mammalian cell transfection. **Promega. Circle 145.**

Literature

Cytosensor Microphysiometer at Work is a reference guide on this system for drug discovery and signal transduction research. The system can be used to study ligand-receptor interactions from a variety of receptor families. **Molecular Devices. Circle 146.**

The ISS HPCell is a brochure on a high-pressure cell system for fluorescence, absorption, and spectroscopy. **ISS. Circle 147.**

GenHunter Corporation 1994/1995 is a catalog with information on several microbiology products, including an improved one-base anchor differential display system, a kit for removal of DNA contaminant from RNA samples, a system for direct cloning of polymerase chain reaction products, sequencing devices, combs, and spacers designed for differential display. **GenHunter. Circle 148.**

Detecting Units for X-ray Microanalysis features a complete line of these instruments. **EDAX. Circle 149.**

Control of Contamination Associated with PCR and Other Amplification Reactions is a manual covering the sources of contamination in polymerase chain reaction (PCR), methods of detection, and how to ensure your reactions are run contaminant-free. **Molecular Bio-Products. Circle 150.**

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Deadlines: Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Ads must be submitted in writing.

How to Submit a Classified Ad:

Prepare double-spaced typewritten copy. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training, Search Firms. *Science* cannot provide proofs of typeset line ads.

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Washington, DC 20005
Telephone: 202-326-6555
FAX: 202-682-0816

Internet Email: science_classifieds@aaas.org

Rates: Ads are \$43 per line; \$430 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads.

Estimates: *Science* will provide a cost estimate for line ads. This is an approximate cost only. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.

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Cancellations: Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

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CONDITIONS: The AAAS encourages employers to actively recruit and employ underrepresented minority groups. *Science* reserves the right, at its discretion, to edit or decline to publish advertisements submitted to it.

POSITIONS OPEN

ASSISTANT PROFESSOR NEUROBIOLOGY Section of Neurobiology Yale University School of Medicine

The Section of Neurobiology at Yale University School of Medicine invites applications for a tenure-track faculty appointment at the rank of ASSISTANT PROFESSOR in Neurobiology beginning fall of 1995. Existing faculty in the Section of Neurobiology have strong interests in the physiology, anatomy, and development of the cerebral cortex and related structures and new faculty will be selected to complement the strengths of these faculty.

The candidate should have a Ph.D., substantial post-doctoral training, and a proven record of research accomplishment. The successful applicant will establish an independent, externally funded research program. Researchers with interest in the physiology, structure or development of the cerebral cortex, using the techniques of molecular neurobiology or cellular physiology (*in vitro* or *in vivo*), are especially encouraged to apply.

Applicants should submit before May 1, 1995, a current curriculum vitae, description of research directions, and name, address and telephone numbers of three references to: Search Committee, Section of Neurobiology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06510. Yale University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR PLANT CELL BIOLOGIST

The Department of Biology invites applications for a tenure-track position at the ASSISTANT PROFESSOR level in the area of plant cell biology. Evidence of proficiency in both teaching and research will be used as selection criteria. Applicants must have a Ph.D. and will be expected to establish an externally funded research program. Preference will be given to applicants using molecular techniques to address cellular questions in higher plant cells and whose research interests complement existing departmental research programs. Utah State University is a Carnegie I Research Institution, and the Biology Department (<http://www.biology.usu.edu>) offers both Ph.D. and M.S. degrees. There are interdisciplinary programs in Molecular Biology, Toxicology, and Ecology, support facilities and services from the Biotechnology Center, and association with the Utah Agricultural Experiment Station. Logan is situated on the western edge of the Rocky Mountains and offers excellent recreational opportunities. Candidates should submit a curriculum vitae, a description of research and teaching interest, and representative reprints. Three letters of recommendation should be sent to: Dr. Keith Mott, Plant Cell Biologist Search Committee, Biology Department, Utah State University, Logan, UT 84322-5305. (801-797-3563 (office); 801-797-1575 (FAX), Email: mott@cc.usu.edu, electronic submissions are not allowed.) Review of applications will begin immediately and will continue until the position is filled. Utah State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

ASSISTANT/ASSOCIATE PROFESSOR MARINE MICROBIOLOGIST/BIOCHEMIST BIOLOGICAL OCEANOGRAPHER

Ph.D. with thesis research in microbiology or a closely related field, and training in molecular biology or biochemistry are required prior to hiring. Emphasis is on bacteria and viruses; prostistology is of lesser importance. Preference may be given to candidates with the following: postdoctoral research experience in marine microbes and their activities; potential to participate in the Graduate School of Oceanography's new global and coastal research initiatives; demonstrated excellence in teaching and advising graduate students. For the rank of associate professor, the applicant must have a demonstrated record of strong, independent research, including grants and/or contracts and publications. This is a calendar year, tenure-track position. Review of applications will begin April 3, 1995, and continue until the position is filled. Please submit a curriculum vitae, the names of four references, and a summary of your research interests to: Elijah Swift, Search Committee Chair, Log. No. 091150, P.O. Box G, URI, Kingston, RI 02881. The University of Rhode Island is an Affirmative Action/Equal Employment Opportunity Employer and is committed to increasing the diversity of its faculty, staff and students. People from underrepresented groups are encouraged to apply.

POSITIONS OPEN

BIOCHEMISTRY/MOLECULAR BIOLOGY MEHARRY MEDICAL COLLEGE

Faculty positions are available in 1995 in the Department of Biochemistry, at the level of ASSISTANT or ASSOCIATE PROFESSOR. Applicants must have a Ph.D. or M.D. degree, or both, and appropriate formal postdoctoral research experience. Joint appointments in clinical science are possible. We are seeking individuals who have potential or demonstrated competence in the use of molecular biological or biophysical approaches to conduct research in molecular medicine, or on fundamental biochemical/cell biological problem(s). Selected individuals must also be capable of, and committed to making significant contributions to teaching and administrative functions of the Department of Biochemistry. Successful applicants will be expected to develop/maintain a funded research program of high quality and to substantially participate in the graduate and professional (medical, dental and allied health) school teaching programs of the Department. Applicants should send curriculum vitae, a statement on teaching interests, names of four individuals who may be contacted for reference, and a summary (not exceeding four pages) of potential research project(s) to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208. An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION Bowman Gray School of Medicine

The Departments of Obstetrics and Gynecology and Physiology and Pharmacology invite applications for a tenure-track position at the ASSISTANT/ASSOCIATE PROFESSOR level in the general area of molecular endocrinology with interests in developmental physiology. Expertise in molecular biology and an active research program or the ability to develop a research program competitive for extramural funding desirable.

Applicant should have a Ph.D. or M.D. degree and postdoctoral experience. Send a curriculum vitae, statement of research interests and plans and names of three references to:

Dr. James C. Rose
Department of Obstetrics and Gynecology
Bowman Gray School of Medicine
Medical Center Boulevard
Winston-Salem, NC 27157

The Bowman Gray School of Medicine is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

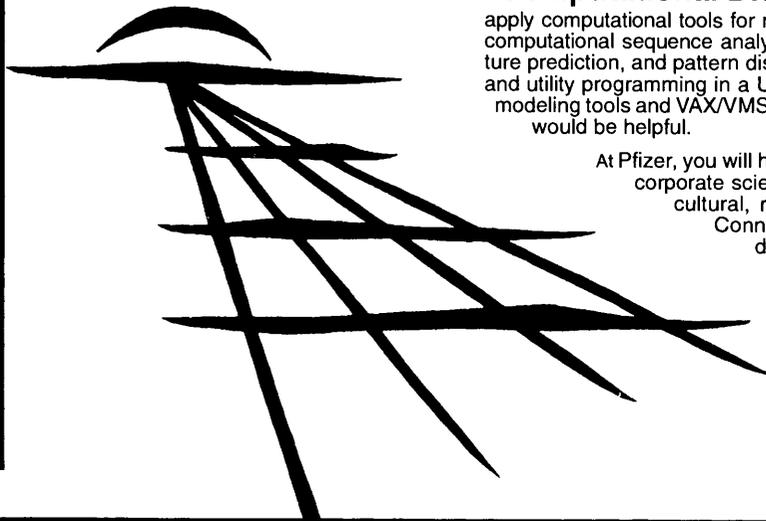
ASSISTANT PROFESSOR TENURE-TRACK Georgetown University School of Medicine Department of Pharmacology

The Department of Pharmacology at Georgetown University invites applications for a tenure-track position at the level of ASSISTANT PROFESSOR. A strong preference will be given to individuals with molecular and cellular approaches to signal transduction in one of the following areas: neuroscience, cancer biology, cardiovascular sciences, or developmental biology.

Candidates should forward their curriculum vitae, a summary of research interests with an indication of future research directions, and arrange for three letters of recommendation to be sent to: Dr. Barry B. Wolfe, Chair, Pharmacology Search Committee, Georgetown University School of Medicine, 3900 Reservoir Road, NW, Washington, DC 20007. Georgetown University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR of Ecology/General Biology. Full-time, two-year replacement position; begins Fall Term 1995. Teaching duties in first year will include one-semester Principles of Ecology course and one-semester introductory biology course. Second year will include the ecology course and an advanced elective for majors that emphasizes animal ecology and could include, but need not be limited to, ethology, populations, physiological ecology or conservation biology. Space/equipment available for research. Ph.D. and commitment to liberal arts education and cultural diversity required. Prior teaching experience preferred. Submit interest letter, résumé and three reference letters by March 8, 1995, to: Biology Search, University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407.

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The scientists of Pfizer Central Research are at the forefront of development in innovative medicines, meeting our commitment to breakthrough pharmaceutical interventions for major unmet needs. The Genetic Technologies group in our Fortune 100 company's Department of Molecular Sciences is now pursuing research initiatives to discover new drug targets in major therapeutic areas. We seek Ph. D. and BS/MS scientists with 2-plus years of postdoctoral or postgraduate experience in these areas:

Molecular Biology Work closely with discovery biology, protein science, and high-throughput screening groups as part of a multi-disciplinary team determining the function of novel genes using *in vitro* and *in vivo* approaches. We require cDNA library construction and cloning experience, genomic cloning and analysis, express and transgene vector construction, and message expression analysis. Experience with computational sequence analysis tools a must, transgenics, mapping, automated DNA sequencing helpful.

Computational Biology You will join a growing team effort to develop and apply computational tools for molecular biology. This work requires expertise in current computational sequence analysis methods for database searching, gene/protein structure prediction, and pattern discrimination, as well as a strong background in database and utility programming in a UNIX/Macintosh environment. Experience with molecular modeling tools and VAX/VMS, coupled with background in molecular biology research, would be helpful.

At Pfizer, you will have opportunities to interact with one of the world's finest corporate scientific communities, in a setting that offers the exemplary cultural, recreational, and educational advantages of Southeast Connecticut. Relocation assistance is available. Please send detailed resume to: **Employee Resources Department, Pfizer Inc, Eastern Point Road, Groton, CT 06340.**

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Central Research



**FRED HUTCHINSON
CANCER RESEARCH
CENTER** **Director
Division of Molecular Medicine**

The Fred Hutchinson Cancer Research Center seeks applicants for the position of Director of the newly established Division of Molecular Medicine. The current eight full time faculty have interests in gene therapy, virology, human and mammalian genetics, immune responses and cancer biology, and an overall interest in biological processes relevant to human health and disease. The Division has full access to Center resources for new appointments, post-doctoral fellows and graduate students. The Director has administrative responsibility for appointments and promotions, management, budgets, and assignment of space and resources.

Molecular Medicine bridges scientific disciplines and approaches represented in the divisions of Basic Sciences, Clinical Research and Public Health Sciences. The Molecular Medicine director is expected to serve as the principle focus for further expansion of translational research at the Center. Support for these activities will come from both the regularly appointed and affiliate division membership, and broadly from within the Center.

Qualifications include major interest and experience in human biology and disease, translational research, suitable educational and academic background, scientific reputation, and experience equivalent to a senior leader in a major research organization.

Anticipated appointment at the Full Member (Professor) level. Salary negotiable.

Please send letter of application and curriculum vitae to Dr. Robert W. Day, President and Director, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, LY-301, Seattle, WA 98104. Deadline for receipt of applications is April 15, 1995.

We offer a smoke-free work environment. Fred Hutchinson Cancer Research Center is an Equal Opportunity Employer Committed to Work Force Diversity.

■ **Dean of the Science Faculty** ■
College of Arts and Science

Nominations and applications are invited for the position of Dean of the Science Faculty of the College of Arts and Sciences at the University of Massachusetts Boston. Three Deans collaborate in administering the College of Arts and Sciences: the Dean of Science, Dean of Liberal Arts, and Dean of Undergraduate Education.

The Dean exercises line authority in personnel and budget matters for the sciences: more than 100 full-time faculty in Biology, Chemistry, Engineering, Environmental Sciences, Geography, Mathematics and Computer Sciences and Physics. The Dean provides curricular direction, stimulates research and grant development, is active in fund-raising, and works with the science departments and other departments in the College of Arts and Sciences on general education in sciences.

Candidates must have an earned Doctorate in one of the sciences and a record of teaching and scholarship appropriate for appointment as tenured Full Professor. The successful candidate should have administrative experience including fiscal management and grant development in a department or college offering doctoral degrees. Familiarity with trends in mathematics and science education, including the use of instructional technology, is desirable.

The University offers doctorates in Environmental Biology and Environmental Sciences. Approval for a Ph.D. in Computer Science is expected shortly. Master's degrees may be earned in Biology, Chemistry, and Physics.

Send nominations and applications to: **Chair, Dean of Science Faculty Search Committee, c/o Provost's Office, University of Massachusetts Boston, 100 Morrissey Blvd., Boston, MA 02125-3393.** Applications should include current vitae, names and addresses of at least three references, and letter describing interest in and qualifications for the position. The Search Committee will begin review of applications immediately and continue until the position is filled. An Affirmative Action, Equal Opportunity, Title IX employer.

**University of Massachusetts
Boston**

DIVISION OF BIOLOGY CALIFORNIA INSTITUTE OF TECHNOLOGY

The California Institute of Technology Biology Division is accepting applications for a tenure-track ASSISTANT PROFESSOR position in the area of immunology. Exceptionally well qualified applicants may also be considered at the associate or full professor level. Initial tenure-track faculty appointment is normally for four years. Successful applicants are expected to participate in immunology teaching as well as to generate a creative and productive research program that will interface with the diverse scientific interests represented in the Biology Division.

Applicants should submit a curriculum vitae, list of publications and a brief statement of research interests and plans. In addition, the candidate should arrange to have three letters of reference sent to the search committee to coincide with receipt of the application. All materials should be sent to: **Professor P. H. Patterson, Immunology Search Committee, Division of Biology 216-76, California Institute of Technology, Pasadena, CA 91125.** *The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women and minorities, veterans, and disabled persons are encouraged to apply.*

ASSISTANT/ASSOCIATE FULL PROFESSOR

The Center of Marine Biotechnology of the University of Maryland Biotechnology Institute seeks to fill a tenure-track faculty position with a highly qualified researcher in aquaculture and fisheries biotechnology and molecular biology. Preference will be given to exceptional candidates who have established research programs in the areas of marine transgenics, vertebrate molecular neuroendocrinology, immunology, or developmental biology. Applications will be accepted at the ASSISTANT, ASSOCIATE, or FULL PROFESSOR levels, and the starting rank of the position will be commensurate with the qualifications of the successful candidate. Individuals who have demonstrated outstanding research ability should forward a curriculum vitae, a short description of research plans, and names of three referees by February 28, 1995, to: **Chairman, Search Committee for Aquaculture Biotechnology, Center of Marine Biotechnology, University of Maryland Biotechnology Institute, 600 East Lombard Street, Baltimore, MD 21202.** *The University of Maryland is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

Environmental Scientists: Two full-time, tenure-track positions, likely ASSISTANT PROFESSOR rank, beginning fall 1995. Ph.D. degree required. Postdoctoral research experience preferred. In addition to introductory courses, teaching responsibilities may include: 1) Aquatic Ecologist-limnology, water quality, fisheries ecology, population biology, biostatistics; 2) Terrestrial Ecologist-terrestrial ecology, conservation biology, landscape ecology, biostatistics. Individuals will mentor student research in the environmental science M.S. degree program. Expanded position descriptions available by FAX 360-650-7284. Review will begin March 15, 1995, and continue until the positions are filled. Send full résumé, statement of interest, and evidence of teaching effectiveness to: **Aquatic Search or Terrestrial Search (specify), Huxley College of Environmental Studies, Western Washington University, Bellingham, WA 98225-9181.** *Western Washington University is an Affirmative Action/Equal Opportunity Employer.*

The University of Pennsylvania, Department of Psychiatry, has open position for **RESEARCH ASSISTANT PROFESSOR**, non-tenure-track. Candidate must be a Ph.D. with fellowship training in neuroscience/neurobiology and research interest in mammalian circadian rhythms. Please send letter and curriculum vitae to: **Ava Plotnick, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** *An Equal Opportunity/Affirmative Action Employer.*

The University of Pennsylvania, Department of Psychiatry, has open position for **RESEARCH ASSISTANT PROFESSOR**, non-tenure-track. Candidate must be a Ph.D. with interest and some experience in research related to sleep disorders and ability to attract extramural support. Please send curriculum vitae and letter to: **Ava Plotnick, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021.** *An Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGIST

The Department of Biology at the University of Minnesota-Duluth invites applications for a tenure-track ASSISTANT PROFESSOR position beginning September 1, 1995. The position requires a Ph.D. in a biological science and postdoctoral research experience. Responsibilities include: teaching cell biology, introductory biology, and advanced specialty courses; advisement of undergraduate students; participation in graduate education (M.S. emphasis); and establishment of a strong extramurally funded research program in an area of cell biology. Collaborative research with faculty in one of three University of Minnesota, Duluth School of Medicine departments (Anatomy and Cell Biology, Medical Microbiology and Immunology, Medical and Molecular Physiology) strongly encouraged. Send curriculum vitae, copies of undergraduate and graduate transcripts, statement of teaching and research interests, up to three reprints, and three letters of recommendation that address teaching and research potential to: **Dr. Conrad E. Firling, Cell Biology Search Chair, Department of Biology, University of Minnesota, 10 University Drive, Duluth, MN 55812-2496.** The application deadline is March 20, 1995. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

Male Reproductive Physiologist: A tenure-track ASSISTANT (ASSOCIATE) PROFESSORSHIP is available for a reproductive physiologist whose research interests complement those of 15 faculty in the Animal Reproduction and Biotechnology Laboratory, and focus on spermatogenesis, epididymal function, influence of excurrent ducts and accessory sex gland fluids on sperm function, or regulation of male reproductive function. The successful candidate must have a Ph.D., preferably on site by December 1995, teach systemic physiology or related courses, and establish an extramurally supported research program. Start-up funds will be available. Deadline for applications is April 14, 1995. A letter of application should include current and long-term research interests as well as teaching experience or interest. Provide a curriculum vitae, transcripts, and names, addresses and telephone numbers of four individuals who were asked to provide references. Send to: **Dr. G. D. Niswender, Search Committee Chair, Department of Physiology, Colorado State University, Fort Collins, CO 80523.** *Colorado State University is an Equal Employment Opportunity/Affirmative Action Employer. Women and ethnic minorities are strongly urged to apply. Equal Employment Opportunity Office: 314 Student Services Building, Colorado State University, Fort Collins, CO 80523.*

ASSISTANT PROFESSOR IN BIOLOGY

Applications are invited for a three-year faculty position at the ASSISTANT PROFESSOR level starting August 1995. There is a possibility for renewal with tenure-track status. Applicants should have a strong commitment to teaching and the independent university tradition. Teaching responsibilities will include Human Anatomy and Physiology for pre-physical therapy, nursing, and exercise science students, and a course in introductory biology. A Ph.D. is required, and preference will be given to a candidate with experience in anatomy and physiology laboratory development including the use of computer-based instructional technology. The candidate will also be expected to serve as an advisor to students pursuing the B.S. degree in Exercise Science and to engage in professional development and University service. Pay will be commensurate with education and experience. Applicants should send curriculum vitae, official transcripts, a statement describing their commitment to undergraduate teaching, and three letters of reference to: **Karen Ott, Chair, Department of Biology, University of Evansville, Evansville, IN 47722.** Applications must be received by March 31, 1995.

The University of Evansville operates under a nondiscriminatory policy with regard to race, color, age, religion, handicap and national origin.

ASSISTANT PROFESSOR or ASSOCIATE PROFESSOR expert in cellular and molecular biology. Applicant should have independent program and cooperate with colleagues within and outside the department. Send curriculum vitae to: **Dr. Dale E. Bockman, Department of Cellular Biology and Anatomy, Medical College of Georgia, Augusta, GA 30912-2000.** *An Equal Opportunity/Affirmative Action Institution.*

ASSISTANT PROFESSOR UNIVERSITY OF VERMONT

Department of Medical Technology seeks a full-time, **TENURE-TRACK FACULTY** member to teach undergraduate students and establish an active research program. A doctorate in a field related to microbiology and experience in clinical microbiology are required. Certification as a generalist/specialist is preferred. Starting date: August 1995. Deadline for application: April 30, 1995. Please send cover letter and curriculum vitae to: **Search Committee, University of Vermont, 302 Rowell Building, Burlington, VT 05405.** *The University of Vermont is an Affirmative Action Employer. Women and minorities are encouraged to apply.*

FACULTY POSITION IN PHARMACOLOGY

The Department of Pharmacology at Louisiana State University Medical Center (LSUMC) in Shreveport invites applications from accomplished researchers for a tenure-track ASSOCIATE PROFESSOR position. Applicants must have a M.D. or Ph.D. degree and five years of postdoctoral experience. The applicants' research should complement ongoing research in the Department. The appointee will be expected to establish a strong research program supported by extramural funding, and to participate in the teaching of graduate and medical students. Applications must include a curriculum vitae, a list of publications, selected reprints, a brief summary of current and future research plans, and the names of three referees. Send applications to: **Adrian J. Dunn, Ph.D., Department of Pharmacology, LSUMC, P.O. Box 33932, Shreveport, LA 71130-3932.** *LSUMC is an Equal Employment Opportunity Employer.*

COASTAL MARINE/ESTUARINE BIOLOGY UNIVERSITY OF FLORIDA

Applications are invited for a 12-month, tenure-track faculty position at the ASSISTANT PROFESSOR level. A Ph.D. in a biological discipline and expertise pertinent to fish or shellfish is required. The successful applicant will be expected to develop a vigorous research program and teach at the undergraduate and graduate levels. Send letter of application, curriculum vitae, and the names, addresses and telephone numbers of five references by March 31, 1995, to: **Chair, Search Committee, Department of Fisheries and Aquatic Sciences, University of Florida, 7922 NW 71st Street, Gainesville, FL 32653.** *An Equal Opportunity/Affirmative Action Institution.*

Invertebrate Zoologist. The Department of Biology at Illinois Wesleyan University has a one-year opening, with the possibility of becoming tenure-track, at the ASSISTANT PROFESSOR level in invertebrate zoology for the 1995-96 academic year. The candidate should have a Ph.D., a broad background in biology and a strong commitment to undergraduate excellence. Responsibilities for the academic year include teaching invertebrate zoology (introductory and upper-level), invertebrate lectures of general biology course (six lectures), two general biology labs each semester, and non-majors course. Applicants should submit a letter of application, curriculum vitae, transcripts, a one-page statement of teaching philosophy and three letters of recommendation (including comments on teaching effectiveness) to: **Dr. Bruce B. Criley, Chair, Biology Department, Illinois Wesleyan University, P.O. Box 2900, Bloomington, IL 61702.** Review of applications begins immediately and will continue until position is filled. *An Equal Opportunity Employer; women and minorities are encouraged to apply.*

Two tenure-track faculty positions at the ASSISTANT PROFESSOR level available no later than September 1, 1995, in the Department of Pharmacology, University of Wisconsin Medical School, Madison, Wisconsin as part of a Departmental growth program. Applications are invited from individuals who possess the Ph.D. and/or M.D. degree and who will develop a vigorous research program in molecular and/or cellular pharmacology. Submit curriculum vitae and at least three letters of reference to: **Dr. Arnold Ruoho, Chair, Search Committee, Department of Pharmacology, University of Wisconsin Medical School, 1300 University Avenue, Madison, WI 53706.** The first-round deadline for this advertisement is April 15, 1995; however, the position will remain open until filled. *The University of Wisconsin-Madison is an Equal Opportunity/Affirmative Action Employer.*

DROSOPHILA NEUROBIOLOGY INSECT CONTROL

Merck Research Laboratories is seeking applicants for two positions in the Arthropod Control Research Group. The group focuses on mechanism-based drug research in *Drosophila* neurobiology and physiology aimed at insect control. The successful candidates will join an insect control research group with areas of interest including ion channel structure/function, neuronal signaling, neuronal development and insect hormones. The *Drosophila* Research Group is part of a team of 30 researchers in the department of Genetics and Molecular Biology.

Senior Research Biologist: To perform research in *Drosophila* neurobiology using classical and molecular genetic approaches. The qualified individual will be part of a research team focusing on mechanism-based drug development for insect control. The successful candidate will have a Ph.D. or equivalent degree and strong research training in *Drosophila* genetics, biochemistry and/or molecular biology.

Staff Biologist: To perform research in the *Drosophila* Research Group on insect control. Research experience with *Drosophila* is essential and familiarity with molecular biology or insect physiology is desirable. The successful candidate will have an M.S. or equivalent degree in biology, or a B.S. degree or equivalent with at least 1 year of experience working with *Drosophila*.

Salary, benefits and growth potential for these positions are excellent. The work location is in Rahway, New Jersey, approximately 25 miles from New York City. Please send resume, no later than March 1, with an outline of research interest and names of three references addressed to **Dr. Jeff Warmke, c/o Human Resources Manager, Merck & Co., Inc., AD 158-S, P.O. Box 2000, RY80-A-3, Rahway, NJ 07065.** EEO/AA/VH Employer.



The FASEB Journal Editor-in-Chief

The Federation of American Societies for Experimental Biology (FASEB) seeks an Editor-in-Chief of *The FASEB Journal*. The first and current Editor-in-Chief, Dr. William J. Whelan, plans to retire from this position in June 1996 after 10 years of distinguished service.

The Federation of American Societies for Experimental Biology (FASEB) is a coalition of nine biomedical research societies in the disciplines of physiology, biochemistry and molecular biology, pharmacology and experimental therapeutics, investigative pathology, nutrition, immunology, cell biology, biophysics and anatomy. *The FASEB Journal* is an official publication of the Federation designed to report on rapidly changing developments in the life sciences, and publishes state-of-the-art reviews and brief research communications in areas of interest to members of the FASEB Societies. Reviews focus on interdisciplinary aspects of growth points in life sciences research, and research communications emphasize innovative advances in methodology. In addition, the Journal features articles on public affairs and news items about research funding; people and institutions; a calendar of scientific meetings; and, lists of currently released books and new products.

The FASEB Journal has a circulation of about 8,000. Impact factor data compiled by the Institute for Scientific Information indicates that *The FASEB Journal* ranks first out of 59 journals in the biology category, and 11th out of 173 journals in the category of biochemistry and molecular biology.

The Editor-in-Chief is responsible for the development and implementation of editorial policy, for solicitation and quality control of content, and for liaison with production staff. It is anticipated that the Editor-in-Chief will recruit a core clerical staff to assist with manuscript handling at the home institution.

Candidates should be scientists of international stature. They should have a broad knowledge as well as interest in the scientific disciplines of concern to members of the FASEB Societies. Editorial experience, administrative skills and an interest in innovation are also essential.

Applications and nominations may be submitted to:

Editor-in-Chief Search Committee
Executive Office
FASEB
9650 Rockville Pike
Bethesda, Maryland 20814-3998

Closing date for receipt of applications is April 15, 1995

FASEB is an Equal Employment Opportunity/Affirmative Action Employer



FACULTY POSITION IN NMR SPECTROSCOPY

The University of Texas Medical Branch • Galveston, Texas

Continuing development of Structural Biology at UTMB leads to an additional junior, tenure-track faculty position in the area of application of Nuclear Magnetic Resonance (NMR) to solving structures of biological macromolecules. The University of Texas Medical Branch has made a major commitment to create a strong Structural Biology Program on campus to enhance our existing capabilities. The NMR facility, directed by Dr. David Gorenstein, consists of new 400 and 600 MHz Varian spectrometers with a 750 MHz instrument contracted for delivery in January 1995. Endowed foundations, the Medical Branch and NIH funding have provided excellent equipment, a newly renovated facility, and ample additional space in support of Structural Biology. The Unit consists not only of NMR spectroscopists, but also other disciplines relevant to Structural Biology, including computational chemistry and x-ray crystallography.

The successful candidate must have outstanding potential for independent research and record in the field of NMR; will be expected to attract funding from national agencies and to fully participate in graduate education at the departmental level. Affiliation with the Sealy Center for Molecular Science or other relevant academic departments will be available.

Applications should include a complete curriculum vitae, a summary of research interests and names and addresses of at least three references. Review of applications will continue until the position is filled. Applications should be addressed to:

Dr. James C. Lee
Structural Biology Search Committee
Department of Human Biological Chemistry and Genetics
and
The Sealy Center for Molecular Science
University of Texas Medical Branch • Galveston, Texas 77555-1055

*UTMB is an equal opportunity affirmative action employer M/F/D/V UTMB is a smoke-free, drug-free workplace.
UTMB hires only individuals authorized to work in the United States*

PROFESSOR AND CHAIR
Department of Medicinal Chemistry
University of Utah College of Pharmacy

The University of Utah seeks an outstanding scientist to fill the position of **CHAIR** of the Department of Medicinal Chemistry in the College of Pharmacy. Responsibilities include providing leadership for the department; conducting a successful research program that complements others in the department, college and university; supporting pharmacy education and graduate education; and establishing productive interactions with other groups on campus, and within the college. Candidates should hold a doctoral degree, have an outstanding record in research, have a national and international reputation commensurate with appointment at the level of Professor, and have demonstrated administrative skills.

Applications will be accepted until April 1, 1995, or until a suitable candidate is identified. Selection of candidates for interview will begin immediately.

Send application (including curriculum vitae, statement of professional goals, three letters of recommendation) to: **Medicinal Chemistry Search Committee, University of Utah College of Pharmacy, 201 Skaggs Hall, University of Utah College of Pharmacy, Salt Lake City, UT 84112 USA.**

The University of Utah is an Equal Opportunity/Affirmative Action Employer. Applications from women and minority candidates are encouraged.

The College of Medicine at the University of Florida seeks a Professor/Associate Professor and **CHAIRPERSON** for the Department of Biochemistry and Molecular Biology. The Chair will be expected to participate in the development and expansion of the department's research and graduate training programs. The department has excellent facilities and strong collaborative relationships with other departments, research centers and programs within the University, including: Structural Biology, Mammalian Genetics, Gene Therapy, and Diabetes. In addition, opportunities exist for the development of coordinated research programs with the College's General Clinical Research Center, the National High Field Magnet Laboratory, the University of Florida Brain Institute, the University of Florida Cancer Center, and the Interdisciplinary Center for Biotechnology Research. Minimum qualifications include a Ph.D. and/or M.D. degree, a distinguished record of creative scientific productivity, a commitment to enhance graduate and medical education, and a dedication to faculty development. The salary is negotiable. Deadline for applications is April 2, 1995, with an anticipated start date of October 1, 1995. Reply with a letter of interest, curriculum vitae and the names/addresses/telephone numbers of three or more references to: **Dr. Douglas Barrett, M.D., Chair of Biochemistry and Molecular Biology Search Committee, P.O. Box 100296, University of Florida College of Medicine, Gainesville, FL 32610.**

Women and members of minority groups are encouraged to apply. Equal Employment Opportunity/Affirmative Action Employer.

EXECUTIVE OFFICER
AMERICAN ASSOCIATION OF ANATOMISTS

The American Association of Anatomists is seeking an **EXECUTIVE OFFICER** to represent the Association's interest at the office of the Federation of American Societies for Experimental Biology (FASEB) at Bethesda. The Executive Officer reports to the Association's Executive Committee. Individuals interested in the position should send a letter of interest, a curriculum vitae and the names of three individuals willing to provide letters of reference. Preferential consideration will be given to individuals with management experience, formal training and experience in Biomedical Science, and residency in the Washington, DC vicinity. Please send applications by March 10, 1995, to: **Robert D. Yates, Chairman, Tulane Medical Center, Department of Anatomy SL 49, 1430 Tulane Avenue, New Orleans, LA 70112.**

INSTRUCTOR of Biology: Southwestern Oklahoma State University is accepting applications for an individual to teach general biology and introductory zoology. Master's degree plus college level teaching experience required. To apply forward letter of application, résumé, transcripts and three letters of reference to: **SWOSU, Attn. Human Resources, 100 Campus Drive, Weatherford, OK 73096.** Review of applications will begin March 1, 1995, and continue until the position is filled. The expected start date is fall 1995. *Equal Employment Opportunity/Affirmative Action Employer.*

BIOLOGICAL FIELD STATION
DIRECTOR

The University of Mississippi invites applications for a tenure-track, twelve-month position as **DIRECTOR** of the Biological Field Station and **ASSOCIATE PROFESSOR/PROFESSOR** of Biology. Salary and rank commensurate with qualifications. The Field Station is located 10 miles from campus and includes streams, springs, wetlands, and over 200 experimental ponds. Plans are underway for a multimillion dollar development of the Field Station's facilities. Responsibilities: The Director is expected to conceptualize and develop a multifaceted program of research and education at the Field Station. Candidates are sought with broad views of Aquatic/Terrestrial Biology, with proven ability to compete for research funds, and with a dedication to develop the Field Station. The Director must have experience in administration and will be expected to teach and establish a strong research program in his/her specialty. A Ph.D. and the ability to work with a diverse constituency and a commitment to environmental education are required. Deadline for application: Applications will be reviewed starting February 28, 1995. Position open until filled. Starting date July 1, 1995 preferred. Send letter of application, description of teaching qualifications and interests, description of current and future research program, complete curriculum vitae and the names, addresses, and telephone numbers of three references to: **Dr. James A. Kushlan, Chair, Department of Biology, University of Mississippi, University, MS 38677. Telephone: 601-232-7203.**

The University of Mississippi is an Affirmative Action/Americans with Disabilities Act/Equal Opportunity Employer.

ASSISTANT-IN-INSTRUCTION
ENVIRONMENTAL SCIENCE

Middlebury College, Middlebury, Vermont: the Program in Environmental Studies is accepting applications for a three-year position as **ASSISTANT-IN-INSTRUCTION** in Environmental Science to begin 15 June 1995. The position involves developing lab/field exercises for an introductory environmental science course offered in both fall and spring semesters, teaching labs, grading, and coordinating undergraduate teaching assistants. We seek candidates with a strong background in the natural sciences, experience in teaching environmental science with an interdisciplinary perspective, and at least a Master's degree in a natural science or science education. Submit a letter of application, curriculum vitae, statement of teaching interest, transcripts, and names and telephone numbers of three references by March 10, 1995, to: **Chair, Environmental Science Search Committee, Program in Environmental Studies, Farrell House, Middlebury College, Middlebury, VT 05753.** *Middlebury College is an Equal Opportunity Employer and encourages applications from women and members of minority groups.*

BIOLOGY FACULTY

Colby-Sawyer College, an independent, coeducational college noted for its high quality New Hampshire life, has been repeatedly cited by *US News and World Report* as one of the top small colleges in its category. Growing enrollments and innovative new programs have created openings for **FACULTY** who are dedicated to excellence in teaching and a personalized approach to undergraduate liberal arts education. This full-time, nine-month appointment begins September 1995. Doctorate or near completion required, as well as demonstrated excellence in teaching and advising. Responsibilities include advising students, teaching anatomy and physiology courses to Nursing, Sports Science, and Biology majors, teaching in the general education program and teaching upper-level courses in biology. Experience directing undergraduate research projects preferred. Send current curriculum vitae, and names of three references to: **Human Resources Department, Colby-Sawyer College, 100 Main Street, New London, NH 03257. Equal Opportunity Employer.**

A **FACULTY POSITION** is available for a Ph.D. in Bioengineering to maintain a 3T and develop a 6T human NMR imaging and spectroscopy system. Significant experience (more than five years) in Rf coil design and implementation, and experience with meter bore high field systems is required. Please send curriculum vitae to: **Dr. Thomas J. Brady, Director, MGH-NMR Center, Building 149, 13th Street, Room 2301, Charlestown, MA 02129.**

DOROTHY OTTO KENNEDY ENDOWED PROFESSOR in Pharmaceutical Sciences. The Washington State University College of Pharmacy, Department of Pharmaceutical Sciences is inviting applications and/or nominations for an annual, tenured appointment at the **PROFESSOR** level. A Ph.D. and/or M.D. and research emphasis in cancer is required with desired experience in pharmacology/toxicology, pharmaceuticals, or medicinal chemistry. The candidate must have a strong extramurally funded research program and a national/international reputation. Duties include sustaining an independent extramurally funded research program, taking a leadership role in facilitating interaction between researchers in the College of Pharmacy and the Cancer Prevention and Research Center, teaching and directing graduate students in the Pharmacology/Toxicology graduate program, and providing limited instruction to pharmacy students in the professional doctorate program. Application deadline is June 1, 1995, or until the position is filled. Applications should include a curriculum vitae, the names and addresses of three references and a statement of research interests and professional goals. Send nominations and applications to: **Gary G. Meadows, Ph.D., Chair, Search Committee, College of Pharmacy, Washington State University, Pullman, WA 99164-6510. Telephone: 509-335-4753.** *Washington State University is an Equal Opportunity/Affirmative Action Educator and Employer. Members of ethnic minorities, women, Vietnam-era or disabled veterans, persons of disability, and/or persons age 40 and over are encouraged to apply.*

FACULTY POSITION
THE WEIZMANN INSTITUTE OF SCIENCE

The Department of Biochemistry at The Weizmann Institute of Science, Rehovot, Israel is seeking applicants for a tenure-track position at the **SENIOR SCIENTIST (ASSISTANT PROFESSOR)** level starting in the fall of 1995 or later. The Department of Biochemistry provides an excellent and stimulating research environment with groups conducting research in Molecular Genetics (gene expression, DNA replication and repair) and Bioenergetics (membrane transport systems and photosynthesis). Candidates are sought in these and other areas of biology, preferably with a background in protein-DNA interactions, molecular or developmental genetics, enzymology, or protein structure and biophysical methods. The successful candidate is expected to establish an independent and creative research group. Applications should include research plans, curriculum vitae, list of publications and the names of three references, and should be sent to: **Prof. Zvi Livneh, Head, Department of Biochemistry, Weizmann Institute of Science, Rehovot 76100 Israel.**

ASSISTANT MEMBER
SLOAN KETTERING INSTITUTE
MOLECULAR BIOLOGY PROGRAM

The Molecular Biology Program at Sloan Kettering Institute is seeking candidates for a tenure-track position at the **ASSISTANT MEMBER** level to undertake research studying developmental processes. The successful candidates will have demonstrated outstanding potential for a research career in studying developmental processes. Sloan Kettering Institute offers an interactive research environment, with a number of research groups working in areas of molecular biology, developmental biology, cell biology and structural biology. Prospective candidates should send their application to: **Development/Molecular Biology Search Committee, c/o P. Besmer, Box 46, Memorial Sloan Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.** Please submit a curriculum vitae, a research statement including present and future research activities, and three letters of recommendation by March 15, 1995. *Sloan Kettering Institute/Memorial Sloan Kettering Cancer Center is an Equal Opportunity/Affirmative Action Employer.*

Department of Psychiatry, University of Pennsylvania, has two **FACULTY POSITIONS** available for program in neurobiology and behavior. Positions are at either the junior or senior level depending on candidates' qualifications. Candidates must be M.D., Ph.D. with training in genetics and experience in endocrinology, molecular pharmacology and neuroanatomy. Please send letter of intent and curriculum vitae to: **Peter C. Whybrow, M.D., Chairman, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 418 Guardian Drive, Philadelphia, PA 19104-6021. Equal Opportunity/Affirmative Action Employer.**

Procter & Gamble

POSTDOCTORAL DEVELOPMENTAL TOXICOLOGIST

The Procter & Gamble Company has an immediate postdoctoral position available for a scientist to work in our R&D laboratories in Cincinnati. This position is ideal for an individual who desires a postdoctoral experience in developmental toxicology.

The successful candidate will work on the role in teratogenesis of toxicant-induced metallothionein synthesis and/or hepatic acute phase response in the pregnant animal; or effects of teratogens on the expression of pattern formation genes. The laboratory takes a diverse approach (molecular, biochemical, physiological, embryological) to the study of teratogenic mechanisms. Candidates with experience in toxicology or developmental biology are preferred. Our laboratory is part of a large group carrying out basic research in toxicology in a collegial atmosphere where publishing results is stressed.

Procter & Gamble is a world leader in the research, development, manufacture, and marketing of a wide variety of consumer products. Annual sales exceed \$30 billion, and our annual R&D investment is \$1 billion. P&G offers a competitive salary and benefits package, placing us among the top 5% of U.S. firms.

For confidential consideration, please send a letter of introduction, resume, and list of publications to:

Procter & Gamble
R&PD Technical Recruiting, Dept. GD
P.O. Box 538707 • Cincinnati, OH 45253-8707

No agency referrals, please. Must be presently authorized to work in the U.S. on a full-time basis.
An Equal Opportunity Employer

The Extracellular Matrix in Invasion, Metastasis, and Angiogenesis

Friday,
March 10, 1995

MAYER AUDITORIUM

University of Southern California Health Sciences Campus

Program

Welcome

PETER A. JONES, PHD
University of Southern California

Introduction

YVES A. DE CLERCK, MD
University of Southern California

ERKKI RUOSLAHTI, MD

La Jolla Cancer Research Foundation
Integrins as Signaling Molecules in Cell Proliferation, Migration and Apoptosis

DAVID A. CHERESH, PHD

The Scripps Research Institute
Role of Integrin $\alpha_5\beta_3$ in Angiogenesis of Human Tumors

LYNN M. MATRIAN, PHD

Vanderbilt University
Metalloproteinases in Tumor Progression

BONNIE F. SLOANE, PHD

Wayne State University
Cathepsins in Cellular Invasion

JAMES P. QUIGLEY, PHD

State University of New York at Stony Brook
The Plasminogen Activator System in Tumor Invasion and Metastasis

YVES A. DE CLERCK, MD

University of Southern California
Tissue Inhibitors of Metalloproteinases in Tumor Invasion and Metastasis

ZENA WERB, PHD

University of California, San Francisco
Proteolytic Degradation of the Extracellular Matrix During Physiological Invasion

DANIEL B. RIFKIN, PHD

New York University Medical Center
Interplay Between Growth Factors, Matrix and Proteases in Angiogenesis

HELENE SAGE, PHD

University of Washington
Positive and Negative Regulators of Angiogenesis: Sparc and Angiostatin

Symposium organized by USC/Amgen Inc.

No registration fee • Information: (213) 764-0816

DIRECTOR WHITNEY LABORATORY UNIVERSITY OF FLORIDA

Applications are invited for the position of DIRECTOR of the Whitney Laboratory, a research institute of the University of Florida. The Whitney Laboratory is dedicated to exploiting the advantages of marine animals as models in basic biological research; facilitating the application of these results to problems of human health, natural resources and the environment; training future experimental biologists, and contributing to public education. The Whitney Laboratory is located 18 miles south of St. Augustine, Florida. Applicants for Director should have an earned doctorate, an active research program in the physiology, cell biology or developmental biology of marine animals, and demonstrated ability to provide administrative and scientific leadership for a multidisciplinary marine biological laboratory. The Director will have a faculty appointment in an academic unit of the University of Florida. Salary is negotiable and dependent upon qualifications. Applicants should send their curriculum vitae and the names of three professional references by March 30, 1995 to: Andrew Sorensen, Provost, 235 Tigert Hall, University of Florida, Gainesville, Florida 32611-2073. *The University of Florida is an Affirmative Action/Equal Employment Opportunity Employer. The selection process will be conducted under the provisions of Florida's "Government in the Sunshine" and Public Records laws.*



Assistant Professor - Tenure track (anticipated) Protein Biochemistry/Enzymology Department of Biochemistry Louisiana State University

The Department of Biochemistry at Louisiana State University seeks applicants for the position of Assistant Professor. Candidates must have a Ph.D. or equivalent degree in biochemistry or closely related discipline and a record of post-doctoral experience and publications that engender confidence in the applicant's ability to establish an extramurally funded independent research program in *protein structure/function, modern enzymology or enzyme mechanisms*. The department has excellent facilities to support studies of proteins including dichroism, two-dimensional NMR and a premier synchrotron facility which provides intense X-rays up to 10 KeV. The synchrotron is presently being equipped for X-ray diffraction and EXAFS capability. Candidates will be expected to participate in the department's undergraduate and graduate teaching programs. Send curriculum vitae, description of proposed research and names and addresses of three references to:

Protein Biochemistry Search Committee
Room 322 Choppin Hall
Louisiana State University
Baton Rouge, Louisiana 70803-1806
Phone: (504) 388-1556
Fax: (504)388-5321

Application deadline:
March 1, 1995 or until filled.

An Affirmative Action/
Equal Opportunity Employer

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral Research Associate position is available for a recently qualified Ph.D. to join a productive research group involved in the study of growth regulation and differentiation of myogenic tumor cells. Studies will involve elucidating the role of insulin-like growth factors in cellular growth and in abrogating the function of myogenic regulatory proteins. A strong background in molecular biology and experience with use of viral vector systems would be advantageous.

Send c.v. and names of three references to:

Dr. Peter J. Houghton
Department of Molecular
Pharmacology



**St. Jude Children's
Research Hospital**
332 N. Lauderdale
Memphis, TN 38105

An equal opportunity/
affirmative action employer

The Department of Pediatrics, Wright State University School of Medicine, and The Children's Medical Center, Dayton, Ohio, seek a third gastroenterologist in the Division of Gastroenterology and Nutrition. This is a fully affiliated faculty position at the ASSISTANT or ASSOCIATE PROFESSOR level. Applicants must be Board-eligible or Board-certified in pediatric gastroenterology and licensable to practice medicine in Ohio and have completed a three year fellowship in pediatric gastroenterology. Preferred experience in patient care, teaching and research, concentrating in pediatric gastrointestinal, hepatic and nutritional disease process. The candidate should have a record of success and be capable of performing independent basic science or clinical research and will have related protected time. He/she must manifest evidence of potential or demonstrable qualities requisite for excellence in teaching and research. The Division of Gastroenterology and Nutrition is rapidly growing with a new 750 square foot research lab located within our 155 bed pediatric hospital. A significant amount of internal funding is designated for use in basic or clinical research. Salary commensurate with professional experience and local standards. Qualified candidates should contact: **Dr. Adam G. Mezoff, Director, Division of Gastroenterology and Nutrition, Department of Pediatrics, The Children's Medical Center, One Children's Plaza, Dayton, OH 45404-1815.** Closing date for receipt of applications is April 30, 1995. First consideration of applications is February 27, 1995, and will continue until the position is filled. *Wright State University and The Children's Medical Center are Equal Opportunity/Affirmative Action Employers.*

Biology Faculty: The College of Mount St. Joseph, a Catholic co-educational college of 2,600 students located in suburban Cincinnati, invites applications for the following faculty position available August 1995: Full-time ASSISTANT PROFESSOR specializing in physiology and embryology. Candidates must have a Ph.D. and a strong commitment to teaching and undergraduate research. Duties may include teaching anatomy and physiology, embryology, general biology, developing a course in physiology, and supervising student research. Applicants should provide a letter of application, curriculum vitae, statements of teaching and research philosophy, and three letters of reference addressed to **Dr. Gene Kritsky, Chair, Department of Biology by March 15, 1995, to: Office of Personnel Services, College of Mount St. Joseph, 5701 Delhi Road, Cincinnati, OH 45233-1670.** *The College of Mount St. Joseph is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR

A TENURE-TRACK POSITION is available for a structural biologist using multi-nuclear NMR techniques to study biomolecule structure and function. A fully equipped NMR spectroscopy laboratory with a Varian VXR 500S NMR Spectrometer is available as well as substantial institutional support to expand/upgrade this facility. Dedicated molecular modeling computers and on-line access to the University of Kentucky IBM 3090 supercomputer are also in place. The successful candidate will be expected to pursue an independently funded research program and to play a substantial role in the planned development of a major new program in Structural Biology. Appointment and teaching responsibilities will be in the University of Kentucky College of Medicine Department of Biochemistry. Interested persons should submit a curriculum vitae, a summary of present and future research interests and three letters of recommendation to: **NMR Faculty Search Committee, Department of Biochemistry, University of Kentucky Medical Center, Lexington, KY 40536-0084.** *An Equal Opportunity/Affirmative Action Employer.*

HUMAN GENETICS DEPARTMENT UNIVERSITY OF UTAH FACULTY POSITIONS TENURE-TRACK - ANY LEVEL

Current faculty interests include: Genetics of Human Disease; Developmental Genetics; Human Genome Project; Molecular Genetics of Gene Regulation; and Population Genetics. Send curriculum vitae and brief description of research interests to: **Raymond F. Gesteland, Department of Human Genetics, University of Utah School of Medicine, Salt Lake City, UT 84112.** FAX: 801-585-3910. *The University of Utah is an Equal Employment Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

VASCULAR BIOLOGY CENTER MEDICAL COLLEGE OF GEORGIA

Applications are invited for two full-time ASSISTANT PROFESSOR positions in the ten-member, interdisciplinary Vascular Biology Center at the Medical College of Georgia. Each position carries appointment to an appropriate academic department. Qualifications include earned M.D. and/or Ph.D. degrees, postdoctoral experience and demonstrated excellence in Vascular Biology. Attractive salary, competitive start-up funds and laboratory space will be provided. Send curriculum vitae and the names of three references to: **Dr. John D. Catravas, Director, Vascular Biology Center, CB3601, Medical College of Georgia, Augusta, GA 30912-2300.** Telephone: 706-721-6338; FAX: 706-721-2347. *The Medical College of Georgia is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR of Molecular Biology and Biochemistry: The University of Idaho is seeking to fill a tenure-track position for an assistant professor. We are interested in candidates capable of establishing a nationally competitive research program to study the molecular biology of plants or fungi in one of two areas: 1) molecular mechanisms of development or 2) responses to abiotic and biotic stimuli. The research program should complement existing departmental programs in plant molecular biology and biochemistry, microbial developmental genetics, medical/pathogenic microbiology and environmental microbiology. The successful candidate must have a strong commitment to teaching excellence and will be responsible for a one-semester undergraduate lecture/laboratory course in basic biochemistry to be taught each year and a graduate-level course in his/her area of expertise in alternate years. Applicants should have a Ph.D. in Molecular Biology, Biochemistry or related field and postdoctoral research experience using contemporary molecular techniques. Send curriculum vitae, statement of research interests and three letters of reference by March 24, 1995, to: **Bruce L. Miller, Search Committee Chair, Department of Microbiology, Molecular Biology and Biochemistry, Life Sciences Building, University of Idaho, Moscow, ID 83844.** FAX: 208-885-6518. *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR NEUROSCIENCE

A TENURE-TRACK POSITION available beginning July 1995 in the Department of Neuroscience, University of California, Riverside. We seek an outstanding neuroscientist, preferably one using cellular/molecular/genetic approaches to topics such as neural development and who has a strong commitment to excellence in teaching and research. Ph.D. or equivalent degree required. Postdoctoral experience strongly preferred. It is expected that the successful candidate will develop collaborative relations with existing neuroscience faculty while establishing a vigorous, independent research program. Teaching duties of department faculty include both graduate and undergraduate courses in neuroscience. Application deadline: 31 March 1995. Applicant should send a curriculum vitae, copies of publications, statement of research and teaching interests, and name, address, telephone and FAX numbers for at least three potential referees to: **Glenn I. Hatton, Chairman, Department of Neuroscience, University of California, Riverside, CA 92521-0146.** *An Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF PENNSYLVANIA Department of Biochemistry and Biophysics

The Department of Biochemistry and Biophysics at the University of Pennsylvania is seeking a senior faculty member with established international reputation for a TENURE-TRACK POSITION in the area of mitochondrial respiration and energy conversion mechanisms, dysfunction and associated disease. The successful applicant will have a strong background in molecular biophysics and well-established links with molecular biologists and clinically oriented studies. Candidates should forward their curriculum vitae, a summary of research interests, and arrange for three letters of recommendation to be sent to: **Ms. Ruth Keris, Staff to Search Committee, Department of Biochemistry and Biophysics, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6059.**

The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer and encourages applications from minorities and women.

EAST STROUNDSBURG UNIVERSITY Biological Sciences

Full-time, continuing ASSISTANT PROFESSOR position for a Molecular Biologist/Geneticist for fall 1995 to teach Introductory Biology and Genetics also including Human Anatomy and Physiology Labs. The successful candidate will have an opportunity to develop courses in their specialty and direct undergraduate/graduate research. Ph.D. required. The applicant should have previous teaching experience and a strong commitment to teaching undergraduates. Salary Range: \$35,661 to \$43,346 including excellent benefits.

Half-time temporary INSTRUCTOR position for the 1995-96 academic year to teach Introductory Biology and Human Anatomy and Physiology Labs. Ph.D. preferred. The applicant should have previous teaching experience and a strong commitment to teaching undergraduates. Salary Range: \$29,338 to \$35,661 including excellent benefits.

Send curriculum vitae and three letters of reference by February 24, 1995, to: **Dr. Raymond Milewski, Chair, Search Committee, Department of Biological Sciences, East Stroudsburg University, East Stroudsburg, PA 18301.**

East Stroudsburg University is an Affirmative Action/Equal Employment Opportunity Employer/Minority/Female/Disabled/Veterans. A Pennsylvania State System of Higher Education University.

POSTDOCTORAL POSITION Harvard Medical School Brigham and Women's Hospital

Biochemistry of transcription activation by RNA polymerase II (see **Parvin et al., Cell, 68:1135, 1992; Parvin and Sharp, Cell, 73:533, 1993**). Requires background in biochemistry, protein purification and molecular biology techniques. Available immediately. Send curriculum vitae and names of three references to: **Dr. Jeffrey Parvin, Department of Pathology, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115.** *Brigham and Women's Hospital is an Equal Opportunity/Affirmative Action Employer.*

MOLECULAR PHARMACOGENETICS POSTDOCTORAL FELLOWSHIP MAYO MEDICAL SCHOOL

POSTDOCTORAL FELLOWSHIP positions are available beginning immediately to participate in ongoing NIH-funded studies of the molecular basis of genetic polymorphisms for drug metabolizing enzymes that alter drug toxicity and/or therapeutic efficacy. Candidates should have a Ph.D. and/or an M.D. degree with experience in pharmacology, molecular biology and/or molecular genetics. Experience in cDNA cloning, gene cloning and DNA polymorphism detection would be helpful. Send curriculum vitae and list of three references to: **Dr. Richard Weinshilboum, Department of Pharmacology, Mayo Medical School/Mayo Clinic, Rochester, MN 55905.** *Mayo Foundation is an Affirmative Action and Equal Opportunity Educator and Employer.*

POSTDOCTORAL TRAINING in Clinical Chemistry. One position available on July 1, 1995, for basic scientist or physician interested in career as laboratory director in academic Laboratory Medicine. Our two-year program provides practical experience in clinical chemistry laboratories and extends relevant basic scientific knowledge. Deadline: 1 April 1995. Write to: **Margaret A. Kenny, Ph.D., Co-Director, Chemistry Postdoctoral Program, Department of Laboratory Medicine SB-10, University of Washington, Seattle, WA 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE

We seek an outstanding individual to work with a multidisciplinary group studying mechanisms of carcinogenesis and novel anticarcinogen agents. Special area of interest is the study of human breast malignancies. Qualified candidates should have a Ph.D. with experience in molecular biology, protein chemistry/analysis and cell culture. Interested candidates should send their curriculum vitae and statement of research interest to: **Leoncio Garrido, Ph.D., Massachusetts General Hospital, NMR Center, Building 149 (2301), 13th Street, Charlestown, MA 02129** by March 27, 1995. *An Equal Opportunity/Affirmative Action Employer.*



**THE NATIONAL
RESEARCH
COUNCIL**
announces a
**Resident Research
Associateship
Award**
to be offered in
**Cell Biology and
Pathology**
at the
**NAVAL MEDICAL
RESEARCH INSTITUTE**
Bethesda, MD

The National Research Council (NRC) is accepting applications for a Research Associateship award at the Naval Medical Research Institute, Bethesda, Maryland.

Research opportunity available in the area of cell biology and ultrastructural pathology of inflammation. Interest and experience in adhesion molecules and cytokines involved in neutrophil induced tissue injury are desirable.

The NRC awardee will work in the above project area as a guest investigator at the Naval Medical Research Institute. Annual stipend for recent Ph.D. recipients is \$32,000 and is appropriately higher for senior researchers. Award is for one year, renewable for a total tenure of three years. Support is provided for relocation and professional travel, and a health insurance program is offered.

For further information contact:
Yuan-Hsu Kang, Ph.D.

**National Naval Medical Center
NAVAL MEDICAL RESEARCH
INSTITUTE**

**Bethesda, Maryland 20889-5607
Fax: (301) 295-0535**

Applications, submitted directly to the NRC, are accepted on a continuous basis throughout the year. Those postmarked by April 15 will be reviewed in June, and by August 15 in October.

FOR APPLICATION MATERIALS CONTACT:
**NATIONAL RESEARCH COUNCIL
Associateship Programs
(TJ-2094/NK)**

**2101 Constitution Avenue
Washington, DC 20418
FAX: (202) 334-2759**

Research Scientists and Specialist: Tree Biotechnology

Westvaco, a major manufacturer of pulp, paper and specialty chemicals is seeking four research scientists and a specialist in our Forest Research organization. Major emphasis will be on hardwood research which will complement an existing pine biotechnology program. These individuals will be located at Westvaco's Forest Science Laboratory in Summerville, South Carolina.

Westvaco's world-class Forest Research program emphasizes forest genetics, biotechnology, productivity, biometrics, harvesting, and environmental protection. Research is conducted using an interdisciplinary team approach to meet the objectives of specific missions. The selected individuals will be expected to integrate, contribute and communicate effectively with other colleagues in this team research environment.

Four Ph.D. scientists and one B.S. or M.S. specialist are needed. Both advanced and entry-level candidates are encouraged to apply. Additional requirements for the positions are as follows:

Scientists: Transformation/Tissue Culture

Two Scientists to develop research programs for highly efficient tissue culture and genetic transformation of hardwood species. Experience in plant tissue culture and/or plant genetic transformation required. Background with woody plants is desirable, but not essential.

Scientist: Genetic Engineering of Sterility

Scientist to develop research program on the physiological, biochemical and molecular basis of flowering with the goal of engineering sterility into trees. Strong background in molecular biology required. Background in molecular biology of sterility in plants desirable.

Scientist: Genetic Engineering of Herbicide/Stress Resistance

Scientist to develop research program on genetic engineering of herbicide and stress resistance into trees. Strong background in plant physiology and/or molecular biology required. Experience in one or more of the following areas is desirable: mode of action of plant stress resistance, plant transformation, and greenhouse or field testing of transgenic plants.

Specialist: Application of DNA Markers

Specialist to develop DNA markers for the identification of selected clones of forest trees. Experience in DNA analysis including DNA isolation (preferably from plants) and handling, restriction digestion, DNA amplification and gel electrophoresis required. The successful applicant should have a M.S. degree in Biology (or related field) or a B.S. degree with equivalent experience.

Salary commensurate with experience and training. Interested individuals should send a letter of intent specifying position title(s), a resume, transcripts, and a list of references to:

**Ms. C. L. McCord
Westvaco-Forest Research
P. O. Box 1950
Summerville, SC 29484**

Closing date for receipt of applications: April 15, 1995 or until suitable candidates are found.

Westvaco is an equal opportunity employer, M/F.

U.S. EPA Office of Research and Development Biologically-Based Dose Response Models for Developmental Toxicity Request for Preproposals

The U.S. EPA Environmental Protection Agency Office of Health and Environmental Assessment (OHEA) and Health Effects Research Laboratory (HERL) is seeking PREPROPOSALS FOR FINANCIAL ASSISTANCE BY COOPERATIVE AGREEMENT with non-profit or not-for-profit research organizations for research on biologically-based dose-response modelling for developmental toxicity. Such agreements require a minimum of 5% cost sharing by the recipient organization. A high degree of collaboration with the EPA researchers involved in these activities is anticipated (e.g., joint planning and conduct of most tasks and co-authored publications).

The primary goal of the project is to conduct research aimed at understanding the fundamental mechanisms of abnormal development and developing mathematical models of mechanism-based dose-response relationships in conjunction with EPA bio-modelers and researchers. Potential focal areas include: (1) segmentation disruption; (2) nucleotide pool imbalances; (3) second/third messenger perturbations. Proposals may address one or more of these areas, or entirely independent and novel areas. Proposals addressing concentration-time (CxT) relationships will be given priority for funding.

Proposals will be evaluated by expert review panels. The review will be based on the proposer's experience with similar research activities, qualifications of the proposed staff and their understanding of appropriate research approaches and technologies, the relevancy to the mission of EPA, and the cooperative nature of the proposed working arrangement with EPA staff. The applicant's proposed budget will also be considered in the selection process. The yearly share of resources for this research area is expected to be \$170,000 for each of 3 years, and EPA anticipates making one or two awards.

ONLY STATE AND LOCAL GOVERNMENTS, NONPROFIT RESEARCH INSTITUTIONS OF HIGHER EDUCATION, INDIVIDUALS, OR NOT-FOR-PROFIT RESEARCH ORGANIZATIONS THAT ARE ELIGIBLE TO RECEIVE FEDERAL ASSISTANCE UNDER THE FOLLOWING ACT SHOULD APPLY: Statute authority for this cooperative agreement is found in the Clean Air Act, 42 U.S.C. §7401 04(a) (2). Interested applicants must be eligible to receive Federal Assistance under the Code of Federal Regulations (CFR) Part 30 General Regulations for Assistance Programs, and Part 40-Research and Demonstration Grants. The government reserves the right to not make awards in the research area described in this solicitation. Additional technical instructions and appropriate application materials will be provided upon request. Technical instructions for preparation of preproposals and proposals should be obtained from: Barbara Blackwell, Health Effects Research Laboratory (MD-51), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; Tel 919-541-2886; Fax 919-541-4324. Responses to this advertisement must be received by close of business (COB) March 31, 1995. Responses should be sent to Barbara Blackwell, Health Effects Research Laboratory (MD-51), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

POSTDOCTORAL POSITION—Massachusetts General Hospital and Harvard Medical School, Boston. Postdoctoral position in antibody engineering for candidates with appropriate experience in molecular biology, immunochemistry, protein chemistry. Research involves structural and functional characterization of mutant antibody combining sites at protein and DNA level. Send curriculum vitae, statement of research interests, and names of three references to: **Dr. Michael N. Margolies, Jackson 1421, Massachusetts General Hospital, Boston, MA 02114. Telephone: 617-726-8552; FAX: 617-726-4811 or 726-6802.**

POSTDOCTORAL POSITIONS

Three **POSTDOCTORAL POSITIONS** are available to study: 1) PKC isozymes and binding proteins/substrates in carcinogenesis; 2) domain mapping and function of a novel diacylglycerol kinase; and 3) the regulation of the vitamin D dependent calcium binding protein, calbindin D-28K in kidney cells. The latter project will focus on modulation of vitamin D receptor mediated events by growth factor signaling pathways and reversible phosphorylation.

Applicants should submit their curriculum vitae and the names and addresses of three references. Applications for positions 1 or 2 should be addressed to: **Dr. Susan Jaken, c/o Personnel Department, and Position 3 to: Dr. JoEllen Welsh, c/o Personnel Department, W. Alton Jones Cell Science Center, 10 Old Barn Road, Lake Placid, NY 12946. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL SCHOLAR or Research Assistant. Immediate opening. Requires strong biophysics background. Structure-function studies of the 1) channel activity of tumor necrosis factor (*Science*, 255; 1427, 1992) and 2) DNase activity of diphtheria toxin (*Science*, 246: 1165, 1989). Send curriculum vitae plus recommendations to: **Dr. B. J. Wisniewski, M&MG, 1602 Molecular Science Building, UCLA, Los Angeles, CA 90024. Email: berniew@microbio.lifesci.ucla.edu; FAX: 310-206-5231.**

POSTDOCTORAL POSITIONS GENE TRANSFER

POSTDOCTORAL POSITIONS are available to study gene transfer and expression *in vitro* and *in vivo* (CNS and lung). A Ph.D. and relevant experience is required. An interest in viral vectors (AAV, adenovirus) and experience with vector delivery to the CNS is desired. Submit curriculum vitae including the names of three references to: **Dr. Philip R. Johnson or Dr. Warren Lo, Children's Hospital Research Foundation, Room W309, 700 Children's Drive, Columbus, OH 43205. FAX: 614-722-2716.**

POSTDOCTORAL POSITION available immediately to participate in NIH-sponsored research on the role of complement regulatory proteins in immunological renal disease. Background in molecular biology (molecular cloning, recombinant DNA methodology, analysis of mRNA) required. Send curriculum vitae, a brief statement of research interests, and names and telephone numbers of three references to: **Dr. Richard J. Quigg, Nephrology Section, The University of Chicago, 5841 South Maryland Avenue, MC 5100, Chicago, IL 60637. FAX: 312-702-4816. Affirmative Action/Equal Opportunity Employer.**

Neurobiology **RESEARCH TRACK POSITIONS** for integrative and/or cellular neuroscientists to join a multidisciplinary research group studying cellular actions of monoamines, functional organization of the locus coeruleus, olfactory bulb and brainstem autonomic and nociceptive circuits. Applicants should possess a Ph.D. and/or M.D. or equivalent and demonstrated experience in one or more of the following techniques: (i) *in vivo* or *in vitro* extracellular/intracellular recording, (ii) axonal tract tracing, and (iii) immunohistochemistry and *in situ* hybridization. Send curriculum vitae and names, addresses and telephone numbers of three references to: **Dr. M. T. Shipley/Dr. M. Ennis, Department of Anatomy, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201. The University of Maryland is an Affirmative Action/Equal Employment Opportunity/ADA Employer.**

POSTDOCTORAL POSITION

Available immediately to study (1) the molecular mechanisms in human carcinogenesis, and (2) the mechanistic approach in cancer chemoprevention. Target organ sites for chemoprevention are: breast, lung, head and neck, and colon. Specific research interest: drug metabolism, detoxification, DNA damage/repair, and cell proliferation. Candidate should have strong background in biochemistry, molecular biology, or cytopathology. Experience in cell culture, PCR, flow cytometry, ELISA, and computers. Applicants should send curriculum vitae, a summary of research interest/experience, a list of names, addresses, and telephone numbers of three references to: **Dr. Jennifer J. Hu, Lombardi Cancer Center, S-level, 3800 Reservoir Road NW, Georgetown University Medical Center, Washington, DC 20007.**

POSTDOCTORAL POSITION for Transgenic Studies in Cellular and Molecular Neurobiology—The Department of Neurobiology has postdoctoral positions available to study various aspects of molecular, cellular and developmental neurobiology. 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 animals, analysis of genes such as Hox and Pax, that control the expression of adhesion molecules and their subsequent roles in the formation of morphogenetic pathways during neural development; identification of signal transduction pathways and the gene programs activated by adhesion molecule binding. Applicants should have a strong background in cellular and/or molecular biology. 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 SBR14, La Jolla, CA 92037. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION: Available immediately to participate in ongoing cellular, biochemical and molecular biology studies on soluble T cell receptor molecules and their role and function in immune regulation. Training in cellular immunology and molecular biology is required and experience in biochemistry/protein purification is desired. Send curriculum vitae, statement of research interests and names of three references with telephone numbers to: **Dr. John W. Moorhead, Department of Immunology, Campus Box B-164, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. FAX: 303-270-7642.**

The University of Colorado is committed to Equal Opportunity and Affirmative Action. Applications from women and minority groups are encouraged.

POSTDOCTORAL POSITION to study tumorigenesis based upon the overexpression of casein kinase II α , as described in this issue of *Science*. Experiments on this and related models will involve the use of transgenic and knock-out mice. Background in molecular biology/biochemistry is required. Please submit a curriculum vitae, a summary of research interests, and the names and telephone numbers of three references to: **David C. Seldin, M.D., Ph.D., Department of Hematology-Oncology, Boston University Medical Center, 88 East Newton Street, Boston, MA 02118.**

POSTDOCTORAL POSITIONS in Antisense Oligonucleotide Research: Positions available immediately to study the transport of antisense oligonucleotides in cells and tissues. A good background in cell biology is essential and experience with digital imaging techniques would be helpful. Applicants should send curriculum vitae and names of two references to: **R. L. Juliano, Department of Pharmacology, University of North Carolina, Chapel Hill, Chapel Hill, NC 27599-7365. FAX: 919-966-5640. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION at the University of Virginia in Kinases and Cell Signaling in laboratory of **T. W. Sturgill**, for biochemist with background and interest in protein phosphorylation research, protein chemistry, protein purification (FPLC), or MAP kinases. Send curriculum vitae, description of research training and career goals, and three references to: **Dr. Thomas W. Sturgill, University of Virginia Medical Center, Markey Center for Cell Signaling, Box 577, Charlottesville, VA 22908. FAX: 804-924-9659.**

POSTDOCTORAL POSITION supported by NIH training grant available immediately to study tyrosine phosphorylation signaling pathways at focal adhesions (see *Proc. Natl. Acad. Sci. U.S.A.*, 89: 8487-8491, 1992; *Mol. Cell. Biol.*, 15: 954-963, 1995). Candidate should have recent Ph.D. and interest in regulation of cell growth and differentiation. Experience in molecular biology and mammalian cell culture desired. Send curriculum vitae and names of three references to: **Dr. Steven K. Hanks, Department of Cell Biology, Vanderbilt University School of Medicine, Nashville, TN 37232. An Affirmative Action/Equal Opportunity Employer.**

ANALYTICAL TOXICOLOGY

The National Center for Toxicological Research (NCTR) seeks a research chemist at the **POSTDOCTORAL level** (\$35,578 per year; sponsored by Interagency Agreement with the EPA). The research efforts will involve analytical and mass spectrometry methods development for multiple residue analysis of aromatic amine and polycyclic hydrocarbon-DNA adducts and afford incumbent an opportunity to participate in a multi-laboratory, interdisciplinary approach to analytical toxicology. The research chemist will participate in the bio-monitoring studies and develop analytical techniques for corroboration of ^{32}P -postlabeling results. Applicants should submit curriculum vitae and the names and addresses of at least three references to: **Fred F. Kadlubar, Ph.D., HFT-100, NCTR, 3900 NCTR Road, Jefferson, AR 72079.**

NCTR is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS IN MOLECULAR VIROLOGY

POSTDOCTORAL TRAINEESHIPS are available through NIH training grants in the broad areas of Viral Oncology and basic Molecular Virology. Research programs include virus structure, replication mechanisms, assembly, immune recognition, protein structure and function, oncogenesis, viral vectors, and vaccine/drug development. Viruses under study are: retroviruses, including HIV and SIV (preceptors include E. Hunter, B. Hahn, G. Shaw, P. Fultz, C. Morrow), influenza virus (G. Air, M. Luo), picornaviruses (M. Luo, C. Morrow), phage P22 (P. Prevelige), VSV and respiratory syncytial virus (G. Wertz), nodavirus and vaccinia virus (L. A. Ball), adenovirus (J. Engler), papilloma virus (T. Broker, L. Chow), and herpesviruses (R. Whitley, W. Britt). These fellowships are only available to U.S. citizens or permanent residents and we regret that we cannot process applications from foreign nationals. Applications and inquiries should be sent to: **Dr. G. Air or Dr. E. Hunter, Department of Microbiology, University of Alabama at Birmingham, UAB Station, Birmingham, AL 35294. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWS. Three positions available immediately. NIH and major pharmaceutical company funded projects to study molecular genetics of sulfotransferases, UDP-glucuronosyltransferases and dipeptide transporters, and regulation of gene expression by xenobiotics (*Chemico-Biol Interact.*, 92:161, 1994 and *Pharm Res.*, 12:317, 1995). Background in drug transport, cellular/molecular biology, or biochemistry is required. Send curriculum vitae and the names of three references to: **Tony Ah-Ng Kong, Ph.D., Director, Laboratory of Molecular Pharmaceutics and Toxicology, Department of Pharmaceutics and Pharmacodynamics (M/C 865), College of Pharmacy, University of Illinois at Chicago, 833 South Wood Street, Chicago, IL 60612. The University of Illinois at Chicago is an Affirmative Action/Equal Opportunity Employer.**

UNDERGRADUATE RESEARCH

The Center for Reproduction of Endangered Species at the San Diego Zoo is seeking five outstanding undergraduates for NSF/Bonner **STUDENT RESEARCH POSITIONS** during summer 1995. Applications from minority and female students are strongly encouraged. Students will participate in biological research on topics involving genetics, physiology, pathology, infectious diseases, virology, endocrinology, and behavior. Full summer stipend (\$3,255) and travel are paid. To apply, send letter of application, transcript, a statement of research interests, and two letters of recommendation to: **Summer Research Program, CRES, San Diego Zoo, Box 551, San Diego, CA 92112, by March 15, 1995. The Zoological Society of San Diego is an Equal Opportunity Employer.**

Tenure-Track And Postdoctoral Opportunities.

Listed below are a few of the outstanding opportunities for conducting research that are now available at the National Institutes of Health.

Tenure-Track Position Assistant Professor Equivalent

Gene Transfer Therapy Alan N. Schechter, MD

Candidates are being sought to initiate an independent research program using modern techniques of molecular genetics, especially gene transfer, to develop new therapies for human disease. Areas of special research interest include stem cell biology, vector development and gene expression control. Relevant research training and a strong publication record is required. A two-page statement of research interests and goals should be submitted in addition to three letters of recommendation. Laboratory of Chemical Biology (OE-67), NIDDK, Building 10, Room 9N307, 10 CENTER DR MSC 1822, BETHESDA MD 20892-1822.

Postdoctoral Positions

Cell Biology of Antigen Presentation Paul A. Roche, PhD

Antigen processing and presentation is being investigated using a variety of cell and molecular biology approaches. Emphasis is on elucidating the intracellular transport route taken by newly synthesized MHC glycoproteins and in identifying the signals that mediate delivery of these proteins to antigen processing compartments. Applicants must have less than five years of postdoctoral experience. Experimental Immunology Branch, (OE-67), NCI, Building 10, Room 4B17, 10 CENTER DR MSC 1360, BETHESDA MD 20892-1360.

Cytoskeleton and Antineoplastic Drugs Ernest Hamel, MD, PhD

Mitosis and cytokinesis are key cell cycle events. Control mechanisms are of intrinsic interest and relevant targets for anticancer drug development. Current research areas include interactions of small ligands and of proteins in microtubule structure and function and drug interactions with actin microfilaments. Applicants must have less than five years postdoctoral experience. Prior cytoskeletal research experience is highly desirable. Laboratory of Molecular Pharmacology, (OE-67), NCI, Building 37, Room 5C25, 37 CONVENT DR MSC 4255, BETHESDA MD 20892-4255.

Laryngeal Neurophysiology Christy L. Ludlow, PhD

The inhibition of laryngeal reflexes and their integrative control during vocalization is being investigated. The central effects of peripheral nerve stimulation and heightened laryngeal stimulation are studied. The chronic effects of peripheral nerve injury and subsequent reinnervation on the modulation of such reflexes and their control is of interest. Applicants should have less than five years postdoctoral experience. Voice and Speech Section (OE-67),

NIDCD, Building 10, Room 5D38, 10 CENTER DRIVE MSC 1416, BETHESDA MD 20892-1416.

Molecular Biology Amy P. Patterson, MD Thomas L. Eggerman, MD, PhD

The molecular basis for the regulation of apolipoproteins, lipids and the development of atherosclerosis is being investigated both *in vitro* and *in vivo*. Specific areas of interest include ontogeny/phylogeny, hormonal, heavy metal and cytokine regulation, particularly as affecting apoB mRNA editing. Experience in molecular biology, cell culture and less than five years of post doctoral training are required. Division of Cellular and Gene Therapy (OE-67), FDA/CBER HRM 515 1401 Rockville Pike, Rockville, MD 20852-1448.

Molecular Biology of Receptors Jürgen Wess, PhD

A position is available to study the molecular mechanisms governing the function, regulation, assembly, and intracellular trafficking of muscarinic acetylcholine and other G protein-coupled receptors by molecular biological and biochemical techniques. Background in molecular biology, cell biology, biochemistry, or molecular modelling is desirable. Applicants must have less than five years of postdoctoral experience. Laboratory of Bioorganic Chemistry (OE-67), NIDDK, Building 8A, Room B1A09, 8 CENTER DRIVE MSC 0820, BETHESDA MD 20892-0820.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings, you may access the NIH EDNET Bulletin Board POSTDOC conference via Internet (wylbur.cu.nih.gov) or modem (1,301-402-2221 or 1,800-358-2221) with parameters set at "7,Even,1". When connected to NIH, type in "vt100" for terminal emulation, "F5E" for initials, and "AJL1" for account number.

The Postdoctoral Research Fellowship Opportunities catalog, which describes intramural laboratories at the NIH, is also available by request. An electronic version of the catalog may be accessed via the Internet using either the Gopher Information System (gopher.nih.gov) or the World Wide Web (<http://www.nih.gov/>). When connected, select *Research Opportunities at the NIH Office of Education*. If you would like to request a catalog or have further questions, please contact the Office of Education, Building 10, Room 1C129, 10 CENTER DR MSC 1158, BETHESDA MD 20892-1158, 301-402-1603, Fax 301-402-0483.

To Apply

If you hold a doctoral degree (e.g., PhD, MD/PhD, MD, DO, DDS, DMD or DVM) accompanied by previous laboratory research experience, 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

Office Of Education

The NIH is an Equal Opportunity Employer

POSTDOCTORAL/RESEARCH FACULTY
Theoretical, Computational, and
Experimental Chemistry and Physics

We are looking for exceptionally able (1) theoretical/computational chemists or physicists with a strong background in quantum or classical dynamics, intense light-matter interactions, quantum control of chemical dynamics, or related areas, (2) experimentalists, particularly with a background in one or more of the following: ultrafast lasers, atomic and molecular beams, laser generated X-rays, charged particle beams, or X-ray physics. Current research interests in our group include (1) theoretical and experimental quantum control of chemical dynamics with femtosecond lasers, (2) development of multi-terawatt femtosecond lasers and their application to high field chemistry and physics, (3) ultrafast, short wavelength electron and X-ray diffraction as applied to imaging molecular quantum dynamics. For a description of current group activities and personnel see our World Wide Web site, <http://www-wilson.ucsd.edu/> or send Email with no text to "wilsjob@ucsd.edu." To apply, please send a curriculum vitae to: **Prof. Kent R. Wilson, Department of Chemistry 0339, University of California, San Diego, La Jolla, CA 92093-0339. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL and RESEARCHER POSITIONS available immediately in structural studies of peptides and proteins. Postdoctoral applicants must have background in one of the following areas: (1) molecular modeling of protein and peptide structure and computer-aided drug design; (2) synthesis and structure of peptides and peptidomimetics. The Researcher position requires a Bachelor's or Master's degree. Knowledge in organic chemistry and peptide synthesis is preferred. Competitive salary and benefits. Send curriculum vitae and arrange for three letters of reference to be sent to: **Professor Ziwei Huang, Department of Pharmacology, Jefferson Cancer Institute, Thomas Jefferson University, Philadelphia, PA 19107. FAX: 215-923-2117; Email: zhuang@calvin.jci.tju.edu. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE position available immediately to study micro-mechanical properties of contractile cells and molecular motile forces using atomic force microscopy and other biophysical techniques. Experimental scientist with a Ph.D. and experience in biochemistry and biophysics is preferred. Send curriculum vitae and names of three references to: **Dr. Sanjeev G. Shroff, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637. FAX: 312-702-1034. Email: sshroff@medicine.bsd.uchicago.edu. Affirmative Action/Equal Opportunity Employer.**

Neurobiology **POSTDOCTORAL POSITIONS** for integrative and/or cellular neuroscientists to join a multidisciplinary research group studying cellular actions of monoamines, functional organization of the locus coeruleus, olfactory bulb and brainstem autonomic and nociceptive circuits. Applicants should possess a Ph.D. and/or M.D. or equivalent and demonstrated experience in one or more of the following techniques: (i) *in vivo* or *in vitro* extracellular/intracellular recording, (ii) axonal tract tracing, and (iii) immunohistochemistry and *in situ* hybridization. Send curriculum vitae and names, addresses and telephone numbers of three references to: **Dr. M. T. Shipley/Dr. M. Ennis, Department of Anatomy, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201. The University of Maryland is an Affirmative Action/Equal Employment Opportunity/ADA Employer.**

POSTDOCTORAL RESEARCH POSITIONS. Molecular biologists to study HIV-1 replication and pathogenesis. Please send curriculum vitae and names of referees to: **Dr. Jeremy Luban, Columbia University, Department of Medicine, 701 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer.**

Seeking a Product Development **BIOCHEMIST** with background in purification including affinity chromatography, electrophoresis, ion exchange, HPLC, SDS-PAGE and blot analysis required. Need conjugation/antibody qualification experience. Master's or Ph.D. with three or more years of industrial experience in test kit development mandatory. Full benefits package and Seattle location. Send résumé to: **BioControl Systems, Inc., 19805 North Creek Parkway, Bothell, WA 98011.**

RESEARCH ASSOCIATE

Regulation of nitric oxide synthase expression in fields of male reproductive biology. Ph.D. in molecular/cell biology, or related areas. Strong experience with gene cloning and expression, cell culture, etc. A knowledge of gene therapy in animal models and protein purification will be a plus. Salary (\$36,000 to \$45,000 plus fringe benefits), commensurate with experience. Available immediately. Send curriculum vitae and three reference letters to: **Nestor G. Cadavid, Ph.D., Harbor-UCLA Medical Center, Department of Surgery, Division of Urology, Building P-6, 1000 West Carson Street, Torrance, CA 91107.**

RESEARCH ASSOCIATE: Investigate experimental and analytical data pertaining to seismic performance of earthquake-resisting structures with specific reference to Reinforced Concrete Structures. Publish technical reports and conference papers in Engineering and technical journals. Serve as an in-house consultant to teaching and research staff in the department. Requirements: Ph.D. in Civil (Structural and Earthquake) Engineering. Three years of experience in the area of Shake-Table testing of RC structural elements and mechanical/mathematical modeling of RC joints. Experience in conducting static and dynamic testing. Solid background in nonlinear FEM analysis of Reinforced Concrete Structures. Ability to formulate mathematical models for design and carry through designing. Salary: \$610.00 per week; 40 hours per week; Job/Interview site: Los Angeles, California. Send this ad and a résumé to: **Job No. DG4178, P.O. Box 269065, Sacramento, CA 95826-9065.**

NEWLY FORMED DEPARTMENT OF MOLECULAR BIOLOGY

The Masonic Medical Research Laboratory (MMRL), a not-for-profit independent basic biomedical research institute located in the foothills of the Adirondack Mountains, invites applications for an individual to head its newly formed Department of Molecular Biology. Position is at a rank of **RESEARCH SCIENTIST I** or **II**, equivalent to Assistant or Associate Professor. Ph.D./M.D. candidates with experience and interest in molecular biology aspects of the electrical function of the heart will be given preference. Appointee will be expected to collaborate with the well-established cardiac electrophysiology and immunology programs at the MMRL. A distinguished record of scientific achievement and a solid track record of extramural grant support are a must. To apply, send a letter of application, a curriculum vitae, and names and addresses of three references to: **Dr. Charles Antzelevitch, Director, Masonic Medical Research Laboratory, 2150 Blecker Street, Utica, NY 13501. An Equal Opportunity/Affirmative Action Employer.**

CLINICAL APPLICATIONS CELL BIOLOGIST—University of California at San Diego/Gene Therapy Program. In collaboration with the Director of the Clinical Applications Laboratory, will be responsible for developing/coordinating large multidisciplinary projects; contributing to gene delivery protocols and developing methodologies to transition research into clinical grade processes and products. Requires Ph.D. in Biological Science or equivalent combination of education/experience; knowledge of the field to contribute to originality/innovation in research results. Prefer working knowledge of process engineering and the appropriate laws governing the manufacture of human pharmaceuticals. Supervisory skills desirable. Salary commensurate with experience. Apply by February 27, 1995, referencing Job No. 106855-S, to: **UCSD Human Resources, 10280 North Torrey Pines Road, Suite 266, La Jolla, CA 92093-0967. Affirmative Action/Equal Opportunity Employer.**

SENSORY PSYCHOPHYSICIST NEUROPHYSIOLOGIST

The John B. Pierce Laboratory, Center for Research in Health and the Environment, an affiliate of Yale University, seeks independent **INVESTIGATOR**, at any level, preferably in chemosensation or somatosensation. Send curriculum vitae, three reprints, and names of three references by April 1, 1995, to: **Sensory Search, John B. Pierce Laboratory, 290 Congress Avenue, New Haven, CT 06519. An Equal Opportunity/Affirmative Action Employer.**

MOLECULAR EPIDEMIOLOGY/BIOMARKERS

The National Center for Toxicological Research (NCTR) seeks an **EPIDEMIOLOGIST** and a **MOLECULAR BIOLOGIST** at the GS-12/13 level (full-time permanent; \$42,641 to \$50,706 per year) to carry out both independent and collaborative studies aimed at assessment of human exposure and individual susceptibility to chemical carcinogens of regulatory or public health concern to the U.S. Food and Drug Administration. The epidemiologist should have experience with transitional/biomarker studies; and the molecular biologist should be familiar with genotyping and DNA sequencing methods. Appropriate technical/postdoctoral support and start-up funding will be provided. Interested applicants (must be U.S. citizens) should submit curriculum vitae and the names and addresses of at least three references to: **Fred F. Kadlubar, Ph.D., Office of Research, NCTR, 3900 NCTR Road, Jefferson, AR 72079.**

NCTR is an Equal Opportunity/Affirmative Action Employer.

RESEARCH SCIENTIST

POSTDOCTORAL RESEARCH SCIENTISTS are being recruited by the Division of Medical Oncology to study the interaction of antisense oligodeoxynucleotides with prostate cancer cells. The ultimate objective is to optimize the use of these compounds as clinical therapeutic agents. Expertise in molecular biology, and experience with confocal microscopy and/or flow cytometry is preferred. Other positions available to study the mechanism of action of suramin and other polyanions as antineoplastic agents. Candidates should have expertise in molecular biology. Ph.D. or M.D. required. Send curriculum vitae and the names of three references to: **C. A. Stein, M.D., Ph.D., Columbia University, 630 West 168 Street, New York, NY 10032. FAX: 212-305-7438; Email: stein@cuccfa.ccc.columbia.edu. An Affirmative Action/Equal Opportunity Employer.**

ANNOUNCEMENTS

REQUEST FOR APPLICATIONS AVAILABLE

The Center for Indoor Air Research, sponsor of scientific research on a broad range of indoor air topics, has available its 1995 Request for Applications booklet. Applications for January 1, 1996 funding must be received by June 1, 1995. For more information on the Center for Indoor Air Research and/or a copy of the Request for Applications booklet, call or write:

**Center for Indoor Air Research
1099 Winterson Road, Suite 280
Linthicum, MD 21090
Telephone 410-684-3777
FAX: 410-684-3729**

COURSES AND TRAINING

**JOHNS HOPKINS UNIVERSITY
SCHOOL OF HYGIENE AND PUBLIC
HEALTH**

**NIH-Sponsored Training Program in Molecular
and
Cellular Biology of Infectious Diseases**

The Department of Molecular Microbiology and Immunology at the Johns Hopkins University School of Public Health invites applications for fully funded **PRE- and POSTDOCTORAL POSITIONS** for training in the molecular and cellular biology of infectious diseases of global public health importance. This NIH-sponsored training program is restricted to citizens and permanent residents of the United States and comprises course work and research in the areas of immunology, bacteriology, virology and parasitology. Applications for September 1995 must be submitted by March 15, 1995. For more information, please contact: **Dr. Noel R. Rose, Director, Molecular and Cellular Biology of Infectious Diseases Training Program, Department of Molecular Microbiology and Immunology, 615 North Wolfe Street, Baltimore, MD 21205. FAX: 410-955-0105. The Johns Hopkins University actively encourages interest from women and minorities and is an Equal Opportunity/Affirmative Action Employer.**

GIVE YOUR CAREER A STRONG DOSE OF WORLD-CLASS R&D

SmithKline Beecham, a worldwide leader in the pharmaceuticals industry, has excellent opportunities for serious scientists in our Drug Metabolism & Pharmacokinetics Department. This department focuses on the absorption, distribution, metabolism and elimination of candidate drugs to support safety and efficacy studies. Currently, the following positions are available:

Investigator/Contract Operations

Interacting with scientists from other areas such as Toxicology, Regulatory Affairs and external contract houses, this candidate will be responsible for designing, contracting and reporting preclinical ADME and protein binding studies; contracting cytochrome P450 studies; and preparing preclinical sections of MAA/NDAs and responses to preclinical questions from regulatory agencies. Qualifications will include a Ph.D. with 5+ years' relevant experience; excellent communication skills, especially the ability to write clear and concise reports; extensive experience in preclinical drug metabolism and pharmacokinetics; and experience in preparing regulatory submissions and responses. Refer to Job Code L0446.

Scientist/*In Vitro* Biotransformation

The successful candidate will utilize, implement and develop model *in vitro* test systems to evaluate drug biotransformation and drug-drug interactions, species differences in biotransformation and metabolic stability of drug candidates. In a team-focused environment, this individual will quantitatively analyze drugs and metabolites in biological media using HPLC. To qualify, candidates must have a B.S. in Chemistry or related biological science with 1-3 years' experience, or an M.S. with 0-2 years' experience, and working knowledge of biochemical techniques used for *in vitro* drug metabolism studies and quantitative analysis of drugs and metabolites in biological media using HPLC. Refer to Job Code L0301.

Investigator/Biotransformation

The selected candidate will be responsible for the design, conduct and interpretation of studies to investigate the biotransformation of candidate drugs, both *in vivo* and *in vitro*. Job requirements include expertise in separation methods (HPLC, SPE) for the elucidation of metabolic profiles of drugs and metabolites from *in vitro* and *in vivo* sources; chemical mechanisms of biotransformation pathways; and animal handling for conduct of biotransformation studies. Qualifications will include a Ph.D. in Chemistry, Biochemistry or related discipline (postdoctoral experience preferred), thorough knowledge of separations technologies, experience with radioisotopes and methods for quantification of metabolites and experience with isolation and purification of radiometabolites. Refer to Job Code L0008.

Investigator/Biomedical Mass Spectrometry

The selected candidate will be responsible for structural characterization of metabolites of test compounds from *in vivo* and *in vitro* biological samples, developing new physical/chemical methods for characterizing drug metabolites and contributing to the design of *in vivo* and *in vitro* biotransformation studies. Qualified individuals will have a Ph.D. in Biochemistry, Organic, Analytical or Medicinal Chemistry or related discipline; experience with the operation and maintenance of tandem mass spectrometers (particularly triple quadrupoles); experience with the use of spectroscopy, chromatography and chemical derivatizations to deduce chemical structures; publication record demonstrating scientific accomplishments; and experience with the development of HPLC methods. Refer to Job Code L0452.

Investigator/*In Vitro* Biotransformation

Within the parameters of this position, this candidate will utilize, implement and develop model *in vitro* test systems for evaluating drug biotransformation and for predicting drug-drug interactions, species differences in biotransformation and metabolic stability of drug development candidates. In a team-focused environment, the candidate will quantitatively analyze drugs and metabolites in biological media using HPLC and associated detection techniques. Responsibilities will include protocol/report and manuscript preparation. The successful candidate will have a D.V.M. or Ph.D. in Pharmacology, Toxicology or related area, 1-6 years' relevant experience, proven research ability in the field of drug metabolism in particular, and demonstrated skills with *in vitro* test systems. Refer to Job Code L0194.

Located in our state-of-the-art research facility in suburban Philadelphia, SmithKline Beecham offers a competitive compensation/benefits/relocation package. Qualified candidates should send CV/resume, indicating desired Job Code, to: SmithKline Beecham Pharmaceuticals, Job Code _____, PO Box 679, Conshohocken, PA 19428. We are an Equal Opportunity Employer, M/F/D/V.



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MOLECULAR BIOLOGISTS

Cardiovascular Research

Ciba Pharmaceuticals, a world renowned innovator in the research, development and manufacture of pharmaceutical products, has a firm commitment to enhancing the quality of life. To that end, our Cardiovascular Research team is applying tremendous creativity and realizing significant advancement in the treatment of cardiovascular disease.

We are seeking two PhD-level Molecular Biologists to work on project teams to determine functions of novel gene products as drug discovery targets. Qualifications include a strong technical background (cloning, DNA sequencing, recombinant protein expression, etc.) and demonstrable experience in gene isolation, gene regulation and/or characterization of gene function. A background in vascular endothelial or smooth muscle cell biology would be helpful. One position will require an additional 4-5 years of related industrial experience.

We offer salaries commensurate with your experience and education, a generous benefits package, and a unique opportunity to play an integral role in the future of cardiovascular medicine. For confidential consideration, please send your resume, indicating salary history and requirements, to: **Staffing Center, Department JN-390, Ciba Pharmaceuticals Division, 556 Morris Avenue, Summit, New Jersey 07901.** We are an equal opportunity employer.

Preparing for the future



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UNION CAMP CORP., a FORTUNE 200 Company, currently has an excellent opportunity available in its Plant Sciences Group. The qualified individual will be responsible for developing a clonal forestry program based on somatic embryogenesis.

Requirements include PhD in Plant Science and experience in somatic embryogenesis including culture initiation, maintenance and the conversion of somatic embryos into plants. Experience in transformation, cryopreservation, or large scale plant cell culture a plus. Evidence of the above in recent publications and good communication skills are also necessary.

UNION CAMP CORP. offers a challenging research environment within an organization with strong commitment to excellence and to its employees. The Technology Center is conveniently located on Princeton Pike near the intersection of I-295.

For immediate consideration please mail/fax your resume to



Ms. J. DiFranco
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Working closely with synthetic chemists and molecular biologists, the selected candidate will assist with the discovery of novel therapeutics by designing, developing and implementing HTS screening protocols for both biochemical & whole cell assays. The position requires a Ph.D.; a post-doctoral in molecular pharmacology, enzymology, molecular biology or biochemistry; and at least 2 years' experience running HTS in a pharmaceutical environment. An interest in macromolecular & protein-ligand interactions and familiarity with automation & data handling are desired. (Job Code: SNP)

Scientist Position in Molecular Biology

The chosen candidate will need a Ph.D. in molecular biology, biochemistry or related discipline and at least 2 years' academic or industrial post-doctoral experience. The position requires experience with the purification of native & recombinant serine proteases; demonstrated ability in the areas of cloning, expression, and purification of recombinant proteases; sound expression vector construction skills; experience with one or more expression systems (E. coli, yeast, mammalian cells, or baculovirus), and a broad purification/characterization background, which includes affinity, ion exchange, gel filtration and hydrophobic chromatography. (Job Code: SCT)

Arris offers generous salaries & benefits, the potential for career advancement and the opportunity to make significant scientific contributions. For consideration, please send resume & cover letter to:

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Molecular and Biochemical Mechanisms of Macrolide Resistance

Joyce A. Sutcliffe, Ph.D., Infectious Diseases, Pfizer Central Research
Patrice Courvalin, Unite des Agents Antibacteriens, Institut Pasteur, Paris, France

Novel strains of staphylococci resistant to erythromycin by cleavage of the macrocyclic nucleus have recently been detected. In addition, these strains also efflux 14- and 15-membered macrolides. The initial aim of the work is to characterize the genes encoding the macrolide esterase and the macrolide efflux system after cloning in *Escherichia coli* or *Staphylococcus aureus*. Biochemical characterization of these resistance mechanisms includes the development of a macrolide efflux assay in gram-positive cocci.

Signal Transduction-Cancer

Neil Gibson, Ph.D., Cancer, Pfizer Central Research
Ruth Halaban, Department of Dermatology, Yale University

The project's goals are to investigate the signaling pathway mediated by the fibroblast growth factor receptor in normal human melanocytes and malignant melanoma cells. Ph.D. in molecular biology with experience in signal transduction preferred.

Signal Transduction/Insulin Action

E. Michael Gibbs, Ph.D., Metabolic Diseases, Pfizer Central Research
Gustav E. Lienhard, Department of Biochemistry, Dartmouth Medical School

The aim of this joint project is to elucidate at the molecular level pathways of signaling that emanate from the insulin receptor and are mediated by phosphatidylinositol 3-kinase. The research strategy will involve the interruption of the normal signaling pathway from the insulin receptor to the kinase and assessing the effects on insulin's metabolic actions. Experience with a variety of biochemical and molecular techniques and/or transgenic animals is preferred.

Molecular Immunology

Jeff Hanke, Ph.D., Molecular Immunology, Pfizer Central Research

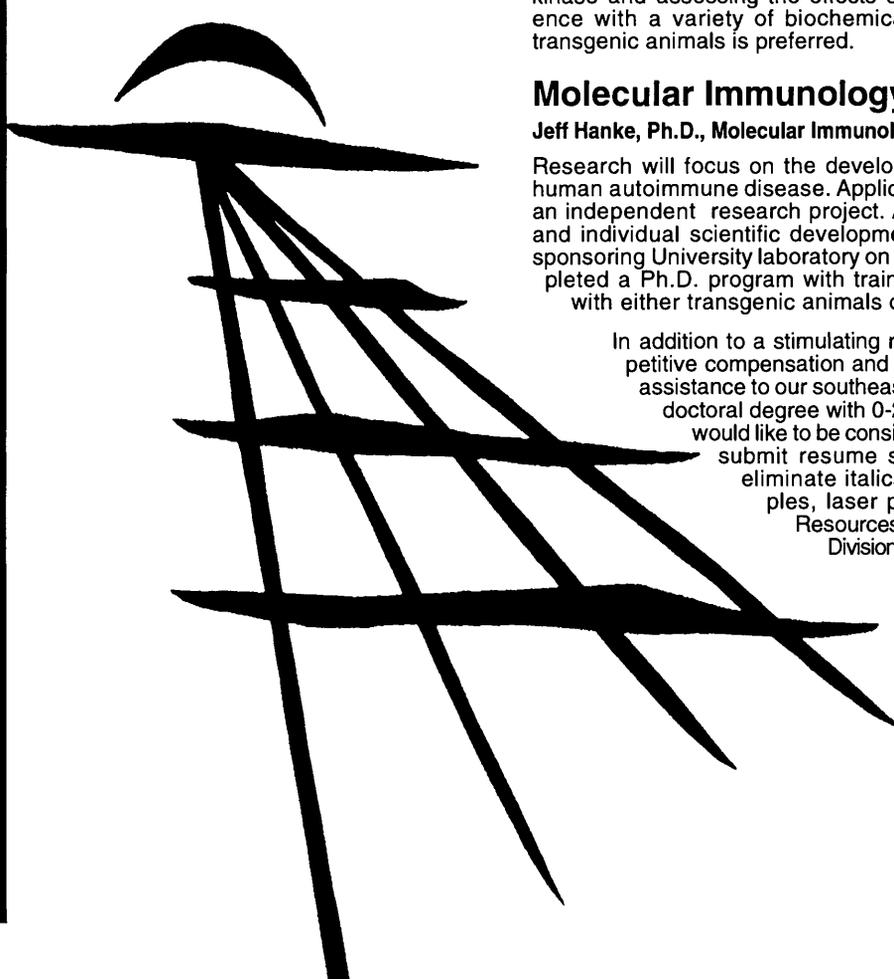
Research will focus on the development of novel transgenic models of human autoimmune disease. Applicants will be expected to carry forward an independent research project. An emphasis is placed on publication and individual scientific development. Several options exist for the co-sponsoring University laboratory on this project. Candidates will have completed a Ph.D. program with training in molecular biology. Experience with either transgenic animals or immunology is a plus.

In addition to a stimulating research environment, we offer a competitive compensation and benefits package, including relocation assistance to our southeastern shoreline community. If you hold a doctoral degree with 0-2 years of postdoctoral experience and would like to be considered for one of these positions, please submit resume suitable for electronic scanning, i.e. eliminate italics, bullets, bolds, underlines and staples, laser printed preferred. Send to Employee Resources, AD 1003, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340.

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Central Research



SCIENTISTS

Integrin Signaling

COR Therapeutics, Inc. is a publicly-held biopharmaceutical company located in the San Francisco Bay Area. We specialize in the discovery and development of novel pharmaceutical products for the treatment and prevention of severe cardiovascular disease. We currently have an exceptional opportunity for experienced Scientists to form a research team focused on basic mechanisms in integrin signaling. A Ph.D. and 2-8 years of relevant research experience are required. Individuals will be hired at the positions of Scientist I, Scientist II, or Senior Scientist, depending on experience and qualifications. Three positions are available.

Molecular Biology

Cloning, expression, and functional characterization of signaling proteins. This position requires broad experience in molecular biology, including developing strategies for cloning and expression of proteins. Preference will be given to individuals with a background utilizing the yeast two hybrid system to characterize signaling proteins (Job Code R47-95).

Biochemistry/ Protein Chemistry

Characterization of integrin signaling pathways. Prior experience in the characterization of cytoplasmic signaling, including structure-function analysis of signaling proteins, is required (Job Code R48-95).

Cell Biology

Identification of integrin binding proteins through expression cloning. Extensive experience in cell biology techniques used to characterize and quantitate cellular activation is required, with preference given to individuals with experience in developing strategies for expression cloning (Job Code R49-95).

COR Therapeutics, Inc. offers competitive salaries, benefits, and attractive equity positions to its employees, combined with the challenge and opportunity to make significant research contributions. To apply, please reference job code and send curriculum vitae to: **COR Therapeutics, Inc., Human Resources, 256 East Grand Avenue, South San Francisco, CA 94080.** COR is an equal opportunity employer.

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Medical Products



The University of Zürich (Switzerland), Faculty of Sciences, invites applications for a

Professorship in Animal Behaviour

Applicants should have an excellent research record in areas concerning physiological or other proximate aspects of behaviour, especially in vertebrates (preferably mammals). The candidate is expected to establish a strong independent research programme and to interact with existing groups in neurobiology and behavioural ecology. He/she is required to participate in the teaching programme of the Institute of Zoology and to deliver lectures in German within two years.

Depending on the qualifications and age of the applicant, the position will be tenurable (Assistant Professor) or tenured (Associate or Full Professor).

Applicants should submit their curriculum vitae, brief summaries of previous research and future research plans, list of publications, copies of up to five major publications, and the names of three potential referees to the following address: Dekan der Philosophischen Fakultät II, Professor Dr. H. Fischer, Winterthurerstr. 190, CH-8057 Zürich, Switzerland. Applications will be accepted until March 15, 1995.

Informal enquiries concerning the position may be addressed to the Head of the Institute of Zoology, Professor Dr. R. Wehner (phone +41 1 257-4831, FAX +41 1 257-5716).

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Candidates should possess a Ph.D. in Immunology or a related field. Knowledge of cellular immunology including T-cell proliferation and cytokine assays, monoclonal antibody production, animal models and antibody isotyping are all required. Excellent verbal and written communication skills are also required for all positions.

PROTEIN CHEMIST

Ph.D. in Protein Chemistry or a related discipline and 3+ years of post-doctoral experience or pharmaceutical experience required. The individual will design and implement protocols for the purification of native and/or recombinant proteins as well as scale-up designed protocols and transfer technology to the process development group.

Knowledge of molecular modeling and immunology would be a distinct asset. Ability to work both independently and as part of a team a must in addition to good computer, communication and interpersonal skills.

PROTEIN BIOCHEMIST

North American Vaccine, Inc. a rapidly expanding company dedicated to research, development and manufacturing of vaccines, has an immediate opening in our process development area.

Qualified candidate will have a Ph.D. in Biochemistry with a minimum of 3 years postdoctoral experience. The selected candidate will be involved in protein and polysaccharide purification process development and chemical/immunological assay development. Working knowledge of protein chemistry and column chromatography is required. Experience in carbohydrate chemistry is a plus.

We offer a competitive salary and benefits package and an environment ideal for professional growth. We're located in Beltsville, Maryland—20 minutes north of Washington D.C. Qualified candidates should send a resume and/or CV indicating position number to:

Human Resources Manager

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EOE/AA

Senior Staff Scientist/Engineer (\$71,664-\$93,166)

The U.S. Nuclear Regulatory Commission's mission is to protect America's health, safety, and environment in the civilian use of nuclear materials. We are currently seeking a qualified individual with knowledge of the principles associated with radioactive waste disposal and nuclear material safety for a Senior Staff Scientist/Engineer position at our Nuclear Waste Branch in Rockville, MD.

Responsibilities include coordinating and participating in activities of the Advisory Committee for Nuclear Waste (ACNW) in connection with the committee's review of activities associated with the management and disposal of radioactive waste. In addition, you will provide an expert overview of work on the engineering and/or performance assessment (risk analysis) aspects of both high and low level radioactive waste disposal.

To qualify, you must have knowledge of computer-based codes to describe the performance of disposal facilities, as well as the ability to assess and functional knowledge of probabilistic methods and calculations. In addition, you must have at least one year of experience in the field as well as a sound understanding of related theories, principles and practices. Knowledge of radioactive waste regulations, standards, policies, and long-term performance is essential. Excellent written and verbal communication skills are a must.

This highly visible position could be your opportunity to make a significant contribution to safety standards in the nuclear industry. For consideration, please send your resume or SF-171 by February 17, 1995 to: U.S. Nuclear Regulatory Commission, Office of Personnel, Attn: Sheryl E. Dunn, Mail Stop T-2 032 (Dept. A-95020), Washington, D.C. 20555.



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Research Scientist

The successful candidate will initiate and develop research programs focusing on novel factors regulating cell growth and transformation. Requirements include a Ph.D. with at least 3 years of post-doctoral experience in tumor biology. Candidates must have a broad knowledge of oncogenes, tumor suppressors, growth factors and receptors, and hands-on experience in at least one of these areas. The ability to direct independent research and familiarity with certain tumor models are highly preferred.
(Job Code: OXP-SC-2261)

CELL BIOLOGY

Research Associate

The successful candidate will maintain established cell lines and primary endothelial cell cultures. Other duties include carrying out cell-based functional assays such as the analysis of proliferation, migration, and adhesion. Candidates must have a BS/MS in Cell Biology or related field, at least 2 years' research experience, and some degree of computer proficiency. Experience in immunohistochemistry or receptor-ligand interactions is a plus.
(Job Code: OXP-SC-2240)

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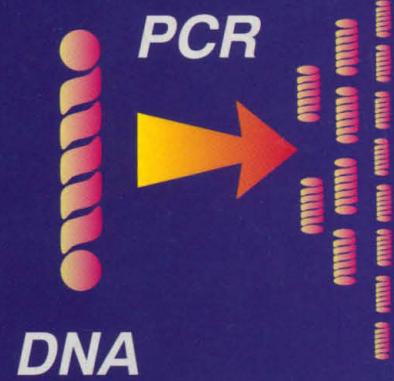
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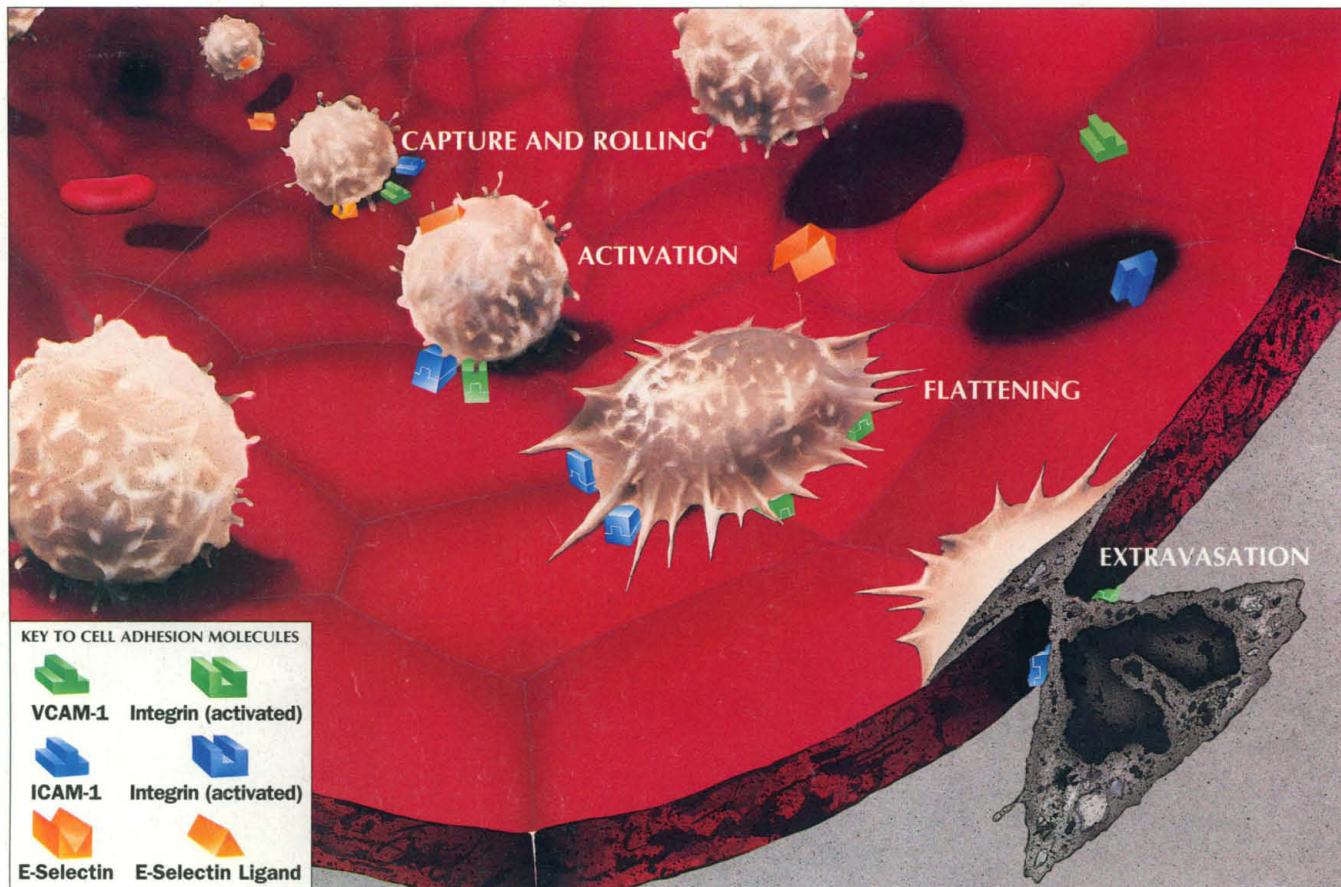
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