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*The W.M. Keck Foundation is pleased to announce that*

## ***Dr. Maria Pellegrini***

*has joined the Foundation as Director of its  
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Dr. Pellegrini comes to the Foundation from the University of Southern California, where she was Dean of Research, College of Letters, Arts & Sciences. She joins Roxanne Ford, Director of the Foundation's Medical Research Grant Program.

The W.M. Keck Foundation's primary interests are university and college research and education programs in the areas of science, engineering and medicine.

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FORUM ON

## **the Promise and Dilemma of New Materials**

**May 28-29, 1998**

*Arnold and Beckman Center  
of the National Academies of Sciences and Engineering  
Irvine, California*

The Academy Industry Program of the National Research Council is sponsoring this forum to examine, in a forward-looking manner, emerging technologies and applications related to new materials that cut across different industrial sectors. The forum will bring together technologists and practitioners with experience in different aspects of new materials for the purpose of mutually informing one another and creating new knowledge and new ideas. A primary objective will be to achieve cross-fertilization among people working across technical and application boundaries within industry, academe, and the federal government. Featured speakers include Robert S. Langer of MIT, Parry Norling of du Pont, and James McGrath of Virginia Tech. Ivan Amato, author of *Stuff: The Materials the World Is Made of*, will deliver a keynote address.

Information about registering for the Forum on the Promise and Dilemma of New Materials is available on the Internet at [www4.nas.edu/develop/etforum.nsf](http://www4.nas.edu/develop/etforum.nsf).

For additional information, contact  
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## POSITIONS OPEN

The Ohio State University invites applications for the position of **CHAIR AND PROFESSOR**, Department of Animal Sciences, College of Food, Agricultural, and Environmental Sciences. Qualifications include a Ph.D. in an animal sciences-related field and scholarly accomplishment and creativity as a scientist and educator that are expected for a Professor at The Ohio State University. The candidate will be expected to administer, coordinate, and identify and foster excellence in the animal sciences programs in resident instruction, extension education, and research. The Department consists of 36 faculty located at Columbus and Wooster, 78 staff, and approximately 400 undergraduate and 65 graduate students. Programs are offered in animal breeding and genetics, growth, molecular biology, meat science, nutrition, physiology, and systems management as they involve beef and dairy cattle, horses, chickens, turkeys, sheep, and swine. Salary is competitive and commensurate with qualifications and experience. The position is available July 1, 1998. Review of applications will begin May 29, 1998, and will continue until a suitable candidate has been identified. Qualified persons should send a letter of application, including a brief statement of their vision for the role of an animal sciences department in a Land Grant University, a curriculum vitae, and a list of at least four references. Nominations and applications should be directed to: **Dr. Steven C. Lorch, Department of Animal Sciences, The Ohio State University, 1680 Madison Avenue, Wooster, OH 44691-4096.** For more information about the Department, see our website: <http://www.ag.ohio-state.edu/~ansci>. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women, minorities, Vietnam-era veterans, disabled veterans, and individuals with disability are encouraged to apply.*

**TENURE-TRACK FACULTY POSITION.** The Department of Physiology and Biophysics at the University of Southern California (USC) School of Medicine seeks to fill a position in the area of neural regulation of food intake. Optimal qualifications include a strong background in integrated neurosystems complemented by nutrition/metabolic regulation. Candidates are expected to have relevant publications and potential for extramural funding, as well as teaching ability. The Physiology and Biophysics Department includes a strong program in metabolic regulation as well as transport biophysics. Interactions are encouraged with the USC Neural, Informational, and Behavioral Sciences Program (a multidepartment and multischool consortium), the Diabetes Division, and the Department of Neurology. Interested individuals should send a statement of research, curriculum vitae, copies of recent publications, and three references to: **Dr. Richard N. Bergman, Chair, Department of Physiology and Biophysics, University of Southern California School of Medicine, 1333 San Pablo Street (MMR 626), Los Angeles, CA 90033.** *USC is an Equal Opportunity Employer. Women and members of underrepresented minorities are encouraged to apply.*

## CHAIR DEPARTMENT OF VETERINARY PATHOBIOLOGY

Applications and nominations are invited for Chair and Tenured Associate or Full Professor of the Department of Veterinary Pathobiology, University of Minnesota. Rank (Associate or Full Professor) will depend on qualifications and experience consistent with collegiate and University policy. For complete position description, contact: **Alberta Mroska, College of Veterinary Medicine, University of Minnesota, 1365 Gortner Avenue, St. Paul, MN 55108.** Application deadline is August 1, 1998, or when position is filled. Further information is available at the College of Veterinary Medicine website: <http://www.cvm.umn.edu>.

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## WINONA STATE UNIVERSITY, MINNESOTA

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## POSITIONS OPEN

## CHAIR DEPARTMENT OF NEUROSCIENCE University of Connecticut School of Medicine Farmington, Connecticut

The University of Connecticut Health Center School of Medicine invites applications for the Chair of the newly created, basic science Department of Neuroscience. This position will include an outstanding resource package that includes a significant number of new, tenure-track faculty positions; generous start-up funds; substantial space in a new, state-of-the-art research building presently under construction with a completion date of October 1998; plus extensive space occupied by an excellent, existing neuroscience core faculty and graduate program. The Department of Neuroscience is one of several new initiatives at the University of Connecticut Medical School, including those in genetics and developmental biology, microbial pathogenesis, molecular medicine, tumor immunology, and vascular biology. The candidate should be a leader of a nationally and internationally recognized research program in the neurological sciences, and should have the academic background and leadership qualities to ensure the vigorous development and growth of a multidisciplinary department. Applicants should submit a complete curriculum vitae, including the names of at least three references, by August 1, 1998, to: **Chairperson, Neuroscience Search Committee, c/o Department of Microbiology, The University of Connecticut Medical School, 263 Farmington Avenue, Farmington, CT 06030-3205.** *An Equal Opportunity/Affirmative Action Employer. Search Code 98-630.*

The Department of Psychiatry and Behavioral Sciences at Stanford University School of Medicine in the Division of Child and Adolescent Psychiatry and Child Development is seeking a qualified **PSYCHIATRIST/PSYCHOLOGIST** for a full-time academic appointment at the **ASSISTANT or ASSOCIATE PROFESSOR** level. This Division is a growing component of an exceptional scientific-medical community that is dedicated to conveying research innovation to the clinical environment. The successful individual in this position should have well-documented interest, training, and expertise in the molecular genetics of neuropsychiatric disorders. This position will be responsible for the initiation and implementation of a basic science laboratory dedicated to the identification and elucidation of genetic factors underlying childhood-onset psychiatric and neurodevelopmental disorders. Candidates should demonstrate an interest in and commitment to both research and teaching, including the training of graduate/medical students, Residents, and Postdoctoral Fellows. Applicants must hold a Ph.D., M.D., or equivalent degree. Candidates holding an M.D. must be Board-eligible or Board-certified in psychiatry, and either hold or be eligible for a California licensure. A Ph.D. in molecular genetics is desirable. Salary and rank will depend upon qualifications. Applicants should forward a curriculum vitae and the names of five referees to: **Dr. Allan Reiss, Chairman of the Search Committee, c/o Department of Psychiatry, Stanford Medical Center, Stanford, CA 94305-5719.** *Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.*

## FACULTY POSITION NOVA SOUTHEASTERN UNIVERSITY OCEANOGRAPHIC CENTER

Applications (Ph.D. required) are invited for an **ASSISTANT or ASSOCIATE PROFESSOR** teaching position. Teaching responsibilities include introductory biology and upper-division biochemistry and cell and molecular biology with associated laboratories to undergraduate pre-health professions and ocean studies students. Limited research opportunities may be available depending on the candidate's research interests. Nova Southeastern University (NSU) offers competitive salaries and comprehensive benefits packages. For confidential consideration, please send your résumé and names and addresses of three work-related references to: **Job Code: AAX, Dr. M. Shivji, c/o Human Resources Department, Nova Southeastern University, 3301 College Avenue, Fort Lauderdale, FL 33314.** Review of résumés will begin immediately and continue until the position is filled. Hiring is subject to the Board of Trustees. *NSU is an Equal Opportunity/Affirmative Action Employer and smoke-free campus.*



# focus on careers: BIOPROCESS

Michael Woods

# SCIENCE

**W**ith the biotech revolution more than 20 years old, and products emerging from the pipeline, bioprocess technology is getting more attention. Companies once concerned mainly with filling jobs in discovery science need key personnel in bioprocessing.

"Excellent career opportunities exist in bioprocessing," said Melvin S. Oka, executive director of the biological process sciences group at Bristol-Myers Squibb Company, Princeton, New Jersey. "Biotech and biopharmaceuticals are starting to reach their potential. Many biotech products will hit the market during the next few years. Companies will need talented, skilled individuals to produce these materials in commercial quantities. Success of the initial products will stimulate still more interest in the whole biotech field, and in bioprocess sciences."

Bioprocessing is as old as humanity's first efforts to use yeast cells and nutrients in cereal grains and fruits to produce beer, wine, and other alcoholic beverages. And it's as new as the latest twists on tangential flow filtration (TFF), clean-in-place (CIP) technology, and other approaches for moving from laboratory to pilot plant to large-scale manufacturing. A new revolution may be just over the horizon: bioprocesses involving transgenic animals. Yet bioprocess science's basic goals remain much the same: harnessing cells, enzymes, and other cell components in biochemical reactions. Given proper temperatures, pressures, flow rates, pH, oxygen concentration, and other conditions, the reactions transform raw materials into useful end products. Bioprocess engineering finds applications in production of medicine and foods, waste management, agriculture, and other fields.

In a way, bioprocess scientists are the scale-up types of the biopharmaceutical industry. Discovery scientists generally produce very small quantities of material in the early stages of research. Bioprocess people help discovery teams produce larger amounts of material for more advanced bench-top research. Ultimately, they transform laboratory-scale techniques for producing, recovering, and purifying a compound into commercial-scale technology for mass marketing the compound as a drug.

Oka's career in bioprocessing began with a biotech start-up company, which he joined after getting a Ph.D. in cell biology and a postdoc. He moved into the pharmaceutical industry, working for seven years on process development for biologics. About five years ago, Oka joined Bristol-Myers Squibb, and now leads one of the process science groups. The group supports late-phase discovery science efforts, process development for preclinical research, and generating the larger quantities of material needed as drug candidates move through early clinical trials.

What kind of degrees can open the door to a career in bioprocessing? Oka cited chemical engineering, biochemical engineering, cell biology, microbiology, biochemistry, and protein chemistry among the most common. But he sees profound changes in the range and complexity of skills expected in bioprocess scientists today. "In the past, people emerged from many separate disciplines such as cell biology, engineering, and purification who contributed individually to the entire

process. Now there is a trend toward integrating diverse skill sets into every bioprocess scientist, and the creation of a new hybrid discipline.

The strongest demand for bioprocess scientists in the future will be for individuals with academic training or industry experience that incorporates such broad knowledge, he said. Bioprocess scientists must have skills in engineering, chemistry, biology, protein chemistry, and other fields. Graduate school programs are responding and giving students more broadly based skills, Oka noted. He advised individuals already working in industry to keep pace and acquire as many bioprocess skills as possible. These range from project conception to vialing.



Melvin S. Oka, Ph.D.

Bioprocess people must, of course, be excellent scientists. However, nonscience skills can tip the balance when recruiters must pick between applicants with equivalent scientific skills. "An ability to communicate, get along with other people, and work effectively on a team are important in every career in the biopharmaceutical industry," Oka pointed out.

But the sheer complexity of bioprocess development makes good interpersonal skills an absolute must for bioprocess scientists, who often interact with individuals working in discovery science, clinical research, patent and licensing, manufacturing, and other areas of drug development. "The challenge is to communicate clearly across those disciplinary lines," Oka said. "It's the kind of challenge that makes this such an interesting career path."

Students can't always count on acquiring such skills in graduate school, Oka added. He suggests that individuals take advantage of every opportunity to get experience doing research in a team setting. Undergraduate group research projects can be very helpful. Internships in an industry setting also can provide invaluable experience.

What about the notion that it takes one mind set to excel in bioprocess engineering, and another in discovery science? Both fields require creativity in solving problems, Oka said. Bioprocess often requires a more structured approach. For example, solutions to problems must be scientifically sound, and also must be evaluated in light of additional factors, such as time, cost, patent, and regulatory requirements.

Oka foresees strong demand for qualified bioprocess scientists in the years ahead, with rapidly evolving fields like pharmaceutical production in transgenic animals offering new challenges and outstanding opportunities.

*Michael Woods writes frequently on the biotechnology and pharmaceutical industries.*



# Light Years Ahead



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### Cell Biologist

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### Bioreactor Technology

Sr. Research Investigator - M.S. or Ph.D. in biochemical engineering and 3-5 years experience that includes familiarity with bioreactor process development for recombinant therapeutics produced by mammalian and microbial cell lines are required. Candidates should have experience in bioreactor process design, modeling, optimization, and scale-up. **Code: PRMM31JKC**

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## THE BLYTHE AND VIOLET EAGLES ENDOWED CHAIR IN FOOD BIOTECHNOLOGY

### Faculty of Agricultural Sciences The University of British Columbia

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We are seeking candidates with a recognized and well-funded research program in food biotechnology, an international reputation, and the academic credentials to support appointment at the rank of Professor. Candidates should have a background in the application of modern biotechnology methods to food systems.

Applications, accompanied by a curriculum vitae, names and addresses of three referees, copies of representative publications and a description of current scholarly interests and activities should be sent to the chair of the selection committee: **Dr. J.F. Richards, Professor (Food Science), Faculty of Agriculture Sciences, 6650 N.W. Marine Dr., The University of British Columbia, Vancouver, BC, Canada V6T 1Z4.**



The closing date is **May 31, 1998**. The anticipated starting date is July 1, 1999. Preliminary inquiries are welcomed. **Ph: (604) 822-2162; Fax: (604) 822-3959; E-mail: richards@unixg.ubc.ca** For further information see [www.interchg.ubc.ca/agsci](http://www.interchg.ubc.ca/agsci) and [www.biotech.ubc.ca](http://www.biotech.ubc.ca)

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**Dr. Jorg J. Goronzy**  
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Arkansas Cancer Research Center



The Arkansas Cancer Research Center (ACRC) is seeking an outstanding basic scientist (PhD or MD/PhD) to lead and develop basic research in breast cancer. Demonstrated experience in planning, organizing, and conducting teams of basic scientists is important. Applicants must be US citizens or permanent residents of the US, have peer-reviewed funding in basic laboratory investigations of breast cancer, have experience in peer review of science, and demonstrate a strong publishing record.

The ACRC has a fledgling program in basic investigation of breast cancer and seeks a Director of Basic Research for Breast Cancer. Located in a new 175,000 square-foot building in the center of the University of Arkansas for Medical Sciences/Veterans Administration Medical Center campus, ACRC laboratories are spacious state-of-the-art facilities. Translational research is facilitated by nearby patient clinics and molecular epidemiology databases of women with breast cancer. In addition, competitive funding opportunities are available through newly appropriated State of Arkansas funds.

Generous start-up funds, and laboratory and office spaces are available. The ACRC is a strong matrix-based cancer center; the selected candidate will receive a tenure track appointment at the Associate Professor or Professor level in the appropriate basic science and/or clinical department.

Please submit your curriculum vitae, a statement of areas of interest, and the names of three professional references to:

**James W. Hardin, PhD**  
Director of Basic Research  
Arkansas Cancer Research Center  
4301 West Markham Street, Slot 623  
Little Rock, AR 72205

*ACRC and UAMS are equal opportunity/affirmative action employers, encourage applications from women and members of minority groups, and provide a smoke-free work environment.*

### APOPTOSIS BIOLOGIST

SCIOS is seeking a PhD to join a team of researchers studying neurodegeneration in model systems of Alzheimer's disease. Applicants should have previous research experience in the area of apoptosis and a strong background in molecular and cellular biology. Post doctoral experience is desirable but not required. Scios has a long term commitment to research on the biology of Alzheimer's disease and to the development of novel therapeutic approaches for this disease. The neurodegeneration program is one of several interrelated and interactive Alzheimer's projects at Scios.

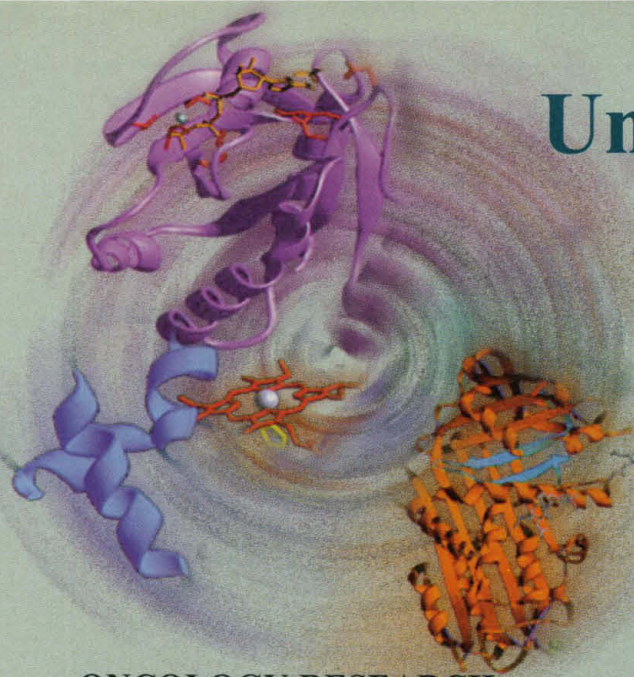
Interested individuals should send a complete curriculum vitae and names of three references to:

**Barbara Cordell, PhD**  
Vice President Alzheimer's Research  
Scios Inc.  
820 West Maude Avenue  
Sunnyvale, CA 94086

*SCIOS is a biopharmaceutical company located in the Silicon Valley of the San Francisco Bay Area. The company is engaged in the discovery, development, and commercialization of human therapeutics focused on cardio-renal and Alzheimer's diseases. Scios is an equal opportunity employer offering competitive salaries and attractive benefits.*

**scios**





# Unlocking the Potential.

## Both your own and that of genomic research.

Pharmacia & Upjohn is among the world's largest pharmaceutical companies, employing over 30,000 people around the globe. We have research centers in Italy, Sweden, and the United States. We are expanding our research staff at these centers to continue our current product discovery success and build additional capability for the future. We are looking for scientists in Genomics, Bioinformatics, High-Throughput Screening, and Chemistry for all of our sites. In addition, we are looking for specialists in CNS Diseases, Infectious Diseases, Metabolic Diseases, and Oncology. In all of these areas our objective is the same: to help people live longer and fuller lives. We are seeking world-class leadership in the following areas:

### ONCOLOGY RESEARCH

#### Department Head Molecular Biology/Genomics

The successful candidate will head up this department engaged in the identification, isolation, and characterization of genes, encoding new molecular targets of oncological interest. This scientist is expected to develop innovative genomic approaches for the identification and characterization of target genes, exploiting new technologies. The position requires a Ph.D. in Molecular or Cell Biology with 5+ years of postdoctoral experience in Oncology or related areas and an excellent publication record. Candidate should have a strong background in a broad range of molecular biology techniques, including cDNA library construction and screening, gene cloning and characterization, and analysis of differential gene expression, and proven success in the isolation and characterization of molecules involved in cell cycle, oncogenic, and apoptotic signal transduction pathways. The candidate should also have a solid background in DNA and protein database searches and computational methods for characterization of novel sequence data. Experience in utilizing microarray technologies and previous participation in a Genomic project are highly desirable.

### CHEMISTRY

#### Department Head Combinatorial Chemistry

The successful candidate will lead a team of chemists and will focus on the discovery and optimization of small molecule lead compounds through the implementation of new high-throughput chemistry, closely interacting with molecular biologists and computational chemists. A Ph.D. in Chemistry and 5+ years of postdoctoral experience with a solid background in synthetic organic chemistry is required, as is expertise in combinatorial chemistry, particularly parallel synthesis and split-pool methodologies, as documented by a strong publication record in the field. Evidence of development of original methods in solid and solution phase synthesis complementing our ongoing efforts will be a plus. Leadership and communication skills are essential.

Oncology Research is centered at our labs in Nerviano, Italy, 20 km outside Milan. Send applications to: D. Didoni, Pharmacia & Upjohn, S.p.A., via R. Koch, 1.2, 20152, Milano, Italy.

### METABOLIC DISEASES RESEARCH

#### Department Head Molecular Biology & Genomics

We are seeking a Ph.D. or M.D. with demonstrated competence in supervising a productive research group in the fields of Molecular Biology and/or Genomics or Bioinformatics. An internationally recognized track record of excellence and research accomplishments using molecular biology, genetics, bioinformatics, and other relevant tools to answer significant biological questions is preferred. Highly developed organizational and interpersonal skills are required. Knowledge of metabolic diseases and an understanding of the medical needs for new therapeutics in our priority disease areas are highly desirable. Experience working in the pharmaceutical industry is desirable.

Metabolic Diseases Research is centered at our labs in Stockholm, Sweden. Send applications to Lotta Hansing, Pharmacia & Upjohn AB, S-112 87 Stockholm, Sweden.

### INFECTIOUS DISEASES RESEARCH

We are in the process of expanding our antiviral and antibacterial research efforts and have initiated a world-class antifungal program. We are looking for motivated and innovative scientists with Ph.D.s and experience in the following disciplines:

**Bacteriology:** The successful candidate will direct a laboratory of two to three B.S./M.S. scientists in a genomic-based antibacterial research effort.

**Molecular Genetics:** This scientist will play a major role in advancing our genomic approaches to the discovery of new infectious disease targets.

**Mycology:** The successful candidate will be joining our fledgling and exciting antifungal discovery effort and will have responsibility for directing the work of 2-3 B.S./M.S. scientists.

**Virology:** This scientist will participate in our advanced programs in CMV and HCV research, as well as define new targets and approaches for antiviral drug discovery.

These scientists will have the opportunity to show individual innovation as well as work in a team setting to chart the course of infectious diseases research for the future. **Position #980220.**

### CNS DISEASES RESEARCH

#### Neuropharmacologist and Neuromolecular Biologists

We are seeking a Neuropharmacologist to develop and utilize etiologic models of neurologic and psychiatric diseases and a Neuromolecular Biologist who will use genomic information in the discovery of new therapeutic targets. Both scientists will be leaders in the development of models to test

new agents for the treatment of neurologic and psychiatric diseases. The successful candidates will lead labs of 2-5 M.S. and B.S. scientists and will investigate novel, efficacious, and safe therapeutic agents for the treatment of diseases such as Alzheimer's disease, Parkinson's disease, migraine, schizophrenia, anxiety, and depression. We invite dynamic, innovative neuroscientists to apply for these key leadership positions in our expanding CNS research organization. Candidates should have a Ph.D. with postdoctoral experience or the equivalent. Strong communication and problem-solving skills plus integrity, perseverance, good judgment, and a drive for results are essential. Successful candidates will show individual initiative while working in a team-based drug discovery effort.

**Position #980219.**

### HIGH-THROUGHPUT SCREENING (HTS)

#### Ph.D. Scientist

The HTS Center is seeking a Ph.D.-level scientist who has a strong background in Biochemistry, Molecular Biology, Cell Biology, Pharmacology, or Engineering. The successful candidate will be responsible for designing and implementing new technologies that will accelerate the drug discovery process. Experience with various assay formats such as radioisotopic, fluorescent, and immunoassay is required. Contemporary skills in molecular pharmacology and sensor technology are required to design and implement Ultra-HTS screens that will support our genomics initiative. The position requires hands-on experience with hardware and software used in HTS, from individual workstations to highly integrated robotic platforms. Candidate should possess extensive informatics experience for data management and pattern recognition. Applicants must be committed to HTS approaches for drug discovery, have a strong desire to be at the forefront of Ultra-HTS technology development, and have the ability to contribute scientifically in several different therapeutic areas. **Position #980221.**

The CNS Research, ID Research, and HTS centers are located in our labs in Kalamazoo, Michigan. Please send applications and appropriate position # to: Pharmacia & Upjohn, Recruiting, 5045-88-81, 7000 Portage Road, Kalamazoo, MI 49001. Or you may e-mail your resume (no attachments, please) to: [recruit@am.pnu.com](mailto:recruit@am.pnu.com).



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We are an equal opportunity employer with a commitment to workplace diversity.



**BIOLOGY DEPARTMENT  
GEORGIA STATE UNIVERSITY  
NEUROENDOCRINOLOGY FACULTY POSITION**

The Department of Biology at Georgia State University invites applications for an anticipated tenure-track position in neuroendocrinology, starting January 1999. We are particularly interested in individuals whose research complements existing research strengths and who employ molecular and cellular approaches to the study of behavior. Applicants at the assistant professor level will be expected to establish independent, vigorous, externally funded research programs. Applicants at more senior levels should have well-established, externally funded research programs. Successful candidates will participate in instruction at the undergraduate and graduate M.S./Ph.D. levels. The Department has excellent research facilities. For more information see <http://www.gsu.edu/~wwwbio>. Reviews of applications will commence May 15, 1998. Applications including CV, reprints, statement of research plans, and three letters of recommendation should be sent to: **Dr. E. Albers, Chair of the Neuroendocrinology Search Committee, Department of Biology, P.O. Box 4010, Georgia State University, Atlanta, GA 30302-4010.**

**POSTDOCTORAL FELLOWS AND  
CONFOCAL MICROSCOPIST**

The Department of Biology of Georgia State University is anticipating seeking:

A. Ten **Postdoctoral Associates** in molecular genetics, neurobiology, cell physiology, and microbiology. For additional information, please e-mail the following Principal Investigators:

1. Neurochemical regulation of circadian rhythms and social behavior by neural circuits in the mammalian brain: **Dr. E. Albers**, [bio@panther.gsu.edu](mailto:bio@panther.gsu.edu).
2. Sympathetic nervous system innervation of adipose tissue using viral tract tracers: **Dr. T. J. Bartness**, [bartness@gsu.edu](mailto:bartness@gsu.edu).
3. Viral RNA structures and their interactions with cell proteins: **Dr. M. Brinton**, [biomab@panther.gsu.edu](mailto:biomab@panther.gsu.edu) or **Dr. W. D. Wilson**, [chewdw@panther.gsu.edu](mailto:chewdw@panther.gsu.edu).
4. Functional organization of peripheral & central olfactory systems: **Dr. C. Derby**, [cderby@gsu.edu](mailto:cderby@gsu.edu).
5. Cellular and behavioral mechanisms for neuronal coincidence detection and social status in the crayfish: **Dr. D. Edwards**, [biohe@panther.gsu.edu](mailto:biohe@panther.gsu.edu).
6. Ion channel modulation by O<sub>2</sub> and CO<sub>2</sub> using a combined molecular-biology and electrophysiology approach: **Dr. C. Jiang**, [cjiang@gsu.edu](mailto:cjiang@gsu.edu).
7. Transport ATPases in bacteria using molecular biology and biochemical approaches. **Dr. P. Kaur**, [bioppk@panther.gsu.edu](mailto:bioppk@panther.gsu.edu).
8. Development of mammalian visual and auditory pathways (electrophysiology and neuroanatomy): **Dr. S. L. Pallas**, [spallas@gsu.edu](mailto:spallas@gsu.edu).
9. Signal transduction mechanisms orchestrating growth cone motility during development and regeneration. **Dr. V. Rehder**, [biovre@panther.gsu.edu](mailto:biovre@panther.gsu.edu).
10. Protein translocation in prokaryotic membranes using molecular genetic and electrophysiology approaches: **Dr. P. C. Tai**, [biopct@panther.gsu.edu](mailto:biopct@panther.gsu.edu).

**B. A Managing Scientist (Research Tech III) for a confocal microscopy center** (housing 3 Zeiss LSM 510). Two years of experience with confocal microscopy and knowledge of Windows NT are required. Contact **Dr. V. Rehder**.

Research projects under the direction of 29 faculty members are supported by 4 million dollars of grants from federal and private agencies. The departmental core facility is well equipped with DNA/peptide sequencing and synthesis facilities, confocal microscopes, electron microscope, cell sorter, atomic force microscope, etc. GSU offers a competitive salary and benefit package. For more information, see our website <http://www.gsu.edu/~wwwbio> or contact specific faculty in **Department of Biology, Georgia State University, P.O. Box 4010, Atlanta, GA 30302, Phone 404-651-2259, Fax 404-651-2509.**

No applications will be accepted for the Postdoctoral Associate and Research Tech III positions unless mailed to: **Georgia State University, Employment Office, University Plaza, Atlanta, GA 30303.**

Please check our website at <http://www.gsu.edu/~wwwhre> for position requirements.

*Georgia State University, a Unit of the University System of Georgia, is an EEO/AA Employer.*

**American College of Rheumatology  
Antigen Presentation: Basic Biology and  
Applications to Autoimmune Disease**

This ACR Basic Research Conference will be held on November 7-8, 1998, at the San Diego Marriott Hotel and Marina in San Diego, California. Conference sessions include:

**Antigen Processing and Presentation**

**Peter Cresswell**, Yale University

**Antonio Lanzavecchia**, Basel Institute

**Peter Jensen**, Emory University

**Structural Biology Of Antigen Presentation And  
T Cell Recognition**

**Don Wiley**, Harvard University

**Roy Mariuzza**, Center for Advanced Research in Biology

**CD1 Based Antigen Presentation And Recognition  
By The  $\gamma\delta$  TCR**

**Michael Brenner**, Harvard Medical School

**Joseph Craft**, Yale Medical School

**Antigen Recognition Models Of Autoimmunity I**

**Gerald Nepom**, Virginia Mason

**Francesco Sinigaglia**, Roche Milano Ricerche

**Grete Sonderstrup**, Stanford University

**Antigen Recognition Models Of Autoimmunity II**

**Hugh McDavitt**, Stanford University

**John Kappler**, National Jewish Medical and Research Center

**Diane Mathis**, IGBMC

This conference will immediately precede the ACR National Meeting in San Diego. For more information about the ACR Basic Research Conference or to receive a call for abstracts or registration information, please call the ACR office at (404) 633-3777.

**PROFESSOR & DEPARTMENT CHAIR  
WILDLIFE ECOLOGY & CONSERVATION  
UNIVERSITY OF FLORIDA**

Applications and nominations are invited for the position of PROFESSOR and CHAIR of the Wildlife Ecology and Conservation Department at the University of Florida. The Department offers the B.S., M.S., and Ph.D. degrees in Wildlife Ecology with programs in conservation biology, landscape ecology and restoration, wildlife management, tropical conservation, urban wildlife relations, and conservation education.

The candidates (1) must have earned doctorate, with one or more degrees in ecological science or natural resources management; (2) should demonstrate exceptional record of scholastic and leadership abilities to foster the department's regional, national, and international programs; and (3) must have vision and ability to enhance relationships with the greater scientific and resource management community, and to develop and strengthen interdisciplinary ties within the university.

Applications should include: letter of intent; curriculum vitae; and names, addresses, telephone numbers, and e-mail addresses for five references.

Applications and nominations should be sent to:

**Dr. Suresh Rao, Chair, Search and Screen Committee  
Director, Center for Natural Resources**

**P.O. Box 110180**

**Institute of Food and Agricultural Sciences**

**University of Florida**

**Gainesville, FL 32611-0180**

**Ph: 352-846-2009; FAX: 352-846-2856**

**e-mail: [cnr\\_director@gnv.ifas.ufl.edu](mailto:cnr_director@gnv.ifas.ufl.edu)**

Nominations will close on May 15, 1998, and applications will close on June 15, 1998.

*Women and minorities are encouraged to apply. The University of Florida is an Affirmative Action and Equal Opportunity Institution.*

# CHIRON

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**WE ARE A VITAL GLOBAL FORCE.** A cogent synergy of science and technology, focused on one thing--controlling disease. Combining diagnostic, vaccine and therapeutic strategies, we wield our core expertise over some of the world's deadliest diseases, including HIV, hepatitis, cardiovascular disease and cancers. The fight is fierce. But through our four healing properties, we exert our shared power to take on disease and transform the practice of medicine around the world.

Our global healthcare markets include Diagnostics (immunodiagnostics, critical care diagnostics and new quantitative probe tests), Therapeutics (with an emphasis on oncology and infectious diseases), Vaccines (both pediatric and adult) and Technologies (with current research programs in combinatorial chemistry, recombinant proteins and gene therapy). We are currently seeking the following professionals to join our diversified scientific team, conveniently located in Emeryville on the beautiful San Francisco Bay.

## **NUCLEIC ACID DIAGNOSTICS**

Sr. Scientist (Job Code: 3224)  
Scientist II, Research (Job Code: 3189)  
Sr. Project Managers (Job Codes: 2740, 3201)  
Project Manager (Job Code: 3224)  
Associate II, Research (Job Code: 3071)  
Associate III, Reference Lab Research  
(Job Code: 3229)

## **PHARMACOLOGY/PHARMACOKINETICS**

Associate Director, Research (Job Code: 3193)  
Scientists II, Research (Job Code: 3172, 3174)  
Associate II, Research (Job Code: 3173)

## **TOXICOLOGY**

Principal Scientist, Development (Job Code: 2620)

## **VACCINES RESEARCH**

Scientist I, Research (Job Code: 3180)  
Associate I-II, Research (Job Code: 3217)  
Associate II-III, Research (Job Code: 3230)  
Postdoctoral Fellow (Job Code: 3231)

## **DRUG DEVELOPMENT & RESEARCH - CHEMISTRY**

Associate Director, Research (Job Code: 3202)  
Associate II, Research (Job Codes: 3111, 3203)

## **PROTEIN PURIFICATION**

Associate III, Development (Job Code: 3158)  
Specialist I/II, Development (Job Code: 3221, 3222)

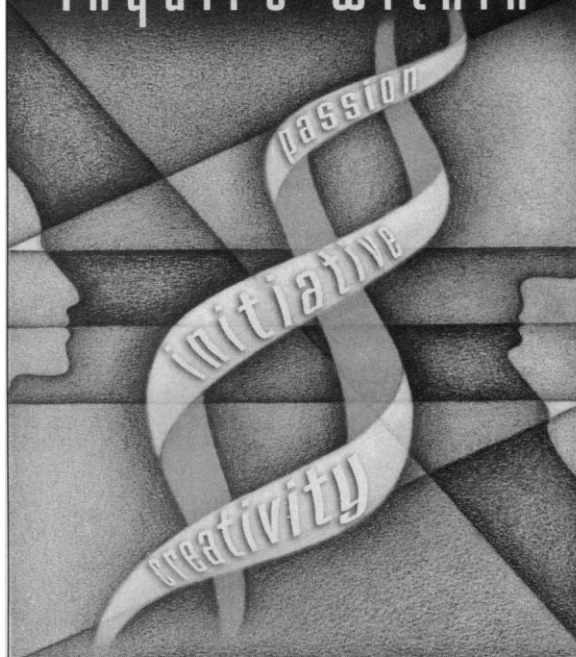
**[www.chiron.com](http://www.chiron.com)**

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Located on four continents, Chiron offers a culturally blended environment that promotes courage, candor and creative exchange. Our employees empower our mission. They think independently and globally. They believe in the value of differing views and the virtues of new ideas. They are the life force of Chiron, working together to create power over disease. To learn how you can join them, please send your resume today, referencing the Job Code corresponding to the position of your interest, to: Chiron Corporation, Human Resources, 4560 Horton Street, Emeryville, CA 94608. As an equal opportunity employer, Chiron honors diversity in every respect.



# Inquire Within



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Genentech's people share some pretty uncommon traits. Not surprising when you consider the scope of our mission – creating breakthrough medicines for conditions like cystic fibrosis, stroke, growth disorders, cancer and heart attacks. It demands a very special kind of person. Someone who will take risks, accept responsibility and constantly seek creative solutions.

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## Scientist, Phage Display

As a highly creative member of an interdisciplinary team of scientists in the Protein Engineering Department, you will develop and apply phage display technology, both to proteins and peptides, and apply mutational and protein engineering technology to the structure-function analysis of proteins. In this dynamic position, you will have the opportunity to work closely with a wide variety of other scientists, including other protein engineers, NMR spectroscopists, x-ray crystallographers, modelers and chemists.

In addition to a PhD – in a relevant field and 1-3 years' postdoctoral experience, you have clearly demonstrated expertise with phage display technology and mutational/protein engineering methods. You are also thoroughly familiar with modern molecular biology techniques, specifically protein expression and purification. Your knowledge of protein structural concepts is also highly desirable.

We offer progressive benefits. Send your resume, indicating Job Code SCI440, to: Genentech, Inc., Human Resources, PO Box 1950, South San Francisco, CA 94083-1950. Plain typefaces, no faxes. E-mail your resume to [jobs@gene.com](mailto:jobs@gene.com) (ASCII files only with a maximum line width of 76 characters). EOE

## COURSES & TRAINING

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Massachusetts Institute of Technology's reputation for scientific and technical leadership is an integral part of its Summer Professional Programs. In many cases, the faculty have developed the theories they teach. The students are your colleagues in business and industry. The resources such as labs, research libraries and apparatus are the same used by regular students, graduate and undergraduate. The curriculum of 50-60 courses is geared to the working professional: high-tech, up-to-date, well-organized and presented in a coherent manner. They directly address the problem most professionals face: How do I obtain and assimilate the information I need to stay competitive in my career?

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Phone: 617-253-2101; fax: 617-253-8042

World Wide Web Home Page: <http://web.mit.edu/professional/>

E-mail: [professional-institute@mit.edu](mailto:professional-institute@mit.edu)

**SUMMER PROFESSIONAL PROGRAMS**



**Pennington  
Biomedical Research  
Center**

## FACULTY POSITION

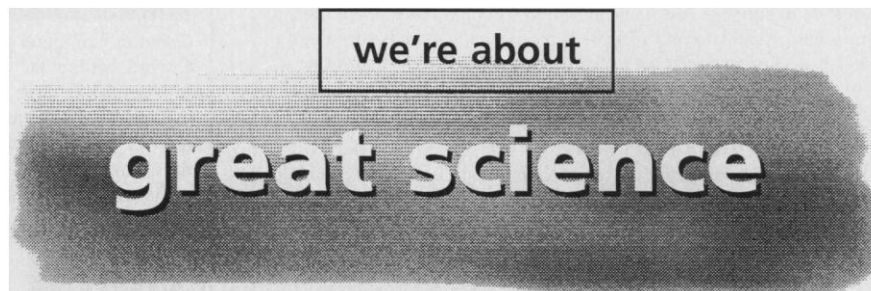
The Pennington Biomedical Research Center at Louisiana State University invites applications for a faculty position at the research assistant professor, instructor, or research associate level. Applicants should have a Ph.D. or equivalent degree with a strong background and expertise in molecular and cell biology. The individual selected will participate in ongoing studies aiming to understand the role of cyclooxygenase in tumorigenesis at Dr. Daniel Hwang's lab. Rank and competitive salary will be commensurate with applicant's qualifications. Applicants should submit a curriculum vitae, and the names of three references to:

**Evelyn Bennett, Assistant Director, HRM**  
**Ref: Faculty**

**Pennington Biomedical Research Center**  
**6400 Perkins Road**  
**Baton Rouge, LA 70808**

Further information can be obtained by telephone: (504) 763-2518 or E-mail: [hwangdh@mhs.pbrc.edu](mailto:hwangdh@mhs.pbrc.edu).

**LSU IS AN EQUAL OPPORTUNITY/AFFIRMATIVE  
ACTION EMPLOYER.**



Merck Research Laboratories in West Point, Pennsylvania, a world leader in biological and pharmaceutical research, has immediate opportunities for highly-qualified scientists in the **Departments of Pharmacology, Virus and Cell Biology, and Automated Biotechnology**.

### Senior Research Pharmacologist

The successful candidate will be responsible for *in vivo* studies assessing mechanisms/pharmacologic modulation of blood vessel proliferation in ophthalmic disorders such as diabetic retinopathy and macular degeneration. Responsibilities include experimental design, conducting/supervising studies, data analysis, interpreting and presenting results, as well as external publication. A MD/Ph.D. degree or equivalent in Physiology, Pharmacology or related area with a minimum of 2 years' postdoctoral experience is required. Extensive knowledge of relevant anatomy and physiology, and hands-on expertise in experimental animal models of ocular neovascularization is preferred. **Job # B-152**

### Biochemist

The qualified candidate will be responsible for conducting basic and developmental research on the identification, isolation, and characterization of proteins expressed in recombinant prokaryotic and eukaryotic systems as well as products from wild type organisms. Also involved is the analytical characterization of purified products and process intermediates. A MS degree in Biochemistry, or equivalent, with a good academic record and a high degree of motivation is necessary. The candidate should have a strong background in current isolation techniques for proteins encompassing methodologies such as low and high pressure liquid chromatography, filtration techniques, equilibrium centrifugation, and electrophoretic methods. Additional experience in carbohydrate or nucleic acid biochemistry is preferred. Familiarity of optical methods, electrophoresis, immunological techniques, cGMP/GLP, and sterile technique is required. **Job # B-153**

### Biologists/Immunologists

Several openings exist for dynamic individuals for research studies leading to the discovery and development of novel human vaccines. The successful candidates will conduct laboratory evaluations of animal and human cellular immune responses to a series of new vaccine candidates. Experience in the performance of cellular immune assays, familiarity with common laboratory immunological techniques and culturing human peripheral blood cells is preferred. Willingness to work with human clinical samples as well as with infectious agents is essential. A BS/MS degree in Biology, Immunology or equivalent with a minimum of several years of research laboratory experience is required. **Job # B-151**

### Biochemist/Staff Biochemist

The successful candidate will assist in the development and optimization of biochemical assays in preparation for automation; perform follow-through assays and mechanistic studies on hits; propose newscreening strategies and novel assay formats; and maintain lab supplies and equipment in the biochemistry laboratory. A BS/MS degree in Biochemistry, or related biomedical science, with 2-5 years of hands-on laboratory experience, or equivalent, is required. Experience with common laboratory instruments, such as HPLC, FPLC, UV-vis, and fluorescence is necessary. Good quantitative skills and familiarity with enzyme kinetics is preferred. Computer literacy and hands-on experience with one or more software programs used in kinetic analysis is needed. **Job #B-156**

### Assay Development Molecular Biologist

As a team member of the Automated Biotechnology Department, you will be responsible for developing high throughput reporter assays for the function of GPC-receptors and nuclear receptors. Identification, design and execution of complex cloning and cell engineering strategies are required. Ability to work with mammalian cells in culture, troubleshoot technical problems, and creatively overcome throughput limiting issues are required. A Ph.D. degree or equivalent with 3-5 years of research experience in mammalian cell biology and gene expression is required. Industrial experience is desirable. Good interpersonal skills are necessary to function as part of this highly interactive team. **Job # B-154**

Excellent salary and benefit programs accompany these positions at our modern research facilities located 25 miles northwest of Philadelphia. Please send *curriculum vitae* with cover letter and the names of three references to: **Indicate Job # \_\_\_\_\_, Merck & Co., Inc., WP42-2, Merck Research Laboratories, P. O. Box 4, West Point, PA 19486**. Only candidates considered for interviews will receive responses. We are an Equal Opportunity Employer, Principals Only, M/F/D/V.



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## Research Opportunities

Cedars-Sinai Medical Center's Neurosurgical Institute, dedicated to conducting unparalleled translational research in neuroscience, seeks highly qualified, motivated scientists to complement its dynamic team of basic and clinical researchers. Cedars-Sinai Neurosurgical Institute is affiliated with the College of Medicine at the University of California at Irvine and offers state-of-the-art facilities at one of the most internationally renowned medical centers conducting a wide spectrum of biomedical research in an interactive environment.

**Research Scientist** — will lead the tumor genetics section responsible for establishing independent research that will focus on genetic analysis of brain tumors employing gene array, chromosomal analytical, and molecular approaches. Candidates must possess doctoral degree, substantive postdoctoral experience evidenced by high-quality research, demonstrate significant publication record, and qualify as "independent investigator"; peer-reviewed funding desirable.

**Postdoctoral Researcher** — several positions available which will study drug delivery, immunology, and gene therapy. Candidates must possess doctoral degree and no more than 5 years research experience in biochemistry, cell biology, immunology, molecular biology, molecular genetics, neurosurgery, or pharmacology. Demonstrated experience in one of the following: blood barrier, endothelial biology, drug delivery, gene/enhancer trapping, positional cloning and analysis of eukaryotic genes, or yeast 2-hybrid system required. Experience *in vivo* models of tumor growth a plus!

**Research Associates** — research technical support positions available in the areas of drug delivery, immunology, and gene therapy. Candidates must possess a Bachelor's degree in biological science or equivalent and 2 years research experience. Master's degree desired. Demonstrated experience in any of the following areas: management, handling of laboratory animals for experimental studies; transfection and analysis of animal cell lines, tissue culturing, and cell line preparation and maintenance; DNA construction, viral vector manipulation and preparation.

We offer a competitive benefits package and a salary commensurate with qualifications. For consideration, please send a cover letter, curriculum vitae, name and phone numbers of at least 3 references, and for scientist and postdoctoral positions bibliography, reprints of up to 3 most important research publications to: **Neurosurgical Institute Research Search Committee, Cedars-Sinai Neurological Institute, Room 490W, 8635 West Third Street, Los Angeles, CA 90048.**

Application deadline is May 31, 1998. Review of applicant information will begin immediately. Potential candidates will be contacted by June 15, 1998.

EOE/AA.

## Technical Support Representative

Genetics Computer Group, a subsidiary of Oxford Molecular Group, is seeking an individual to join its highly regarded technical support team. This individual will provide technical support to customers for the company's full range of bioinformatic software with emphasis on PC and Macintosh products.

### Qualifications

- A degree in molecular biology or related field
- Excellent written and verbal skills
- A strong background in sequence analysis
- Expertise with Windows 95, Windows NT, or Macintosh systems

Familiarity with the following is desirable: MacVector, OMIGA, GCG Wisconsin Package, and UNIX operating systems.

### To apply

Send CV or résumé with references to:

**Genetics Computer Group  
Attn: Technical Support  
575 Science Drive  
Madison, WI 53711**



*GCG is an Equal Opportunity Employer.*



## Supervisory Research Textile Technologist (Research Leader)

The USDA, Agricultural Research Service, Cotton Quality Research Station, Clemson, SC, is seeking a Research Leader. The mission of the Research Station is to determine predictive relationships between cotton fiber properties and manufacturing performance and utility; to determine effects of production and ginning practices on the fiber, spinning, and market quality of cotton; to develop and improve instruments for measuring cotton fiber properties under laboratory and marketing conditions; to improve the classification system to include quality factors more fully reflecting the use value of cotton; and to develop methods to measure and control or minimize contaminants that affect occupational health and environmental health and environmental pollution. The incumbent leads an interdisciplinary research team focusing on industry problems and opportunities for improved competitiveness of the U.S. cotton industry. The Research Leader manages \$2 million budget, modern cotton processing plant, staff of 10, and will increase the research team by hiring 2 scientists. For further information on the Clemson Research Station, please check <http://www.ars-grin.gov/ars/SoAtlantic/Clemson/cqr/>.

*U.S. citizenship required.* Must have a Bachelor's or higher degree in textile technology. Ph.D. is desirable. Must have demonstrated research accomplishments in textile technology. Salary commensurate with experience (Salary Range: GS-14: \$64,998 – \$84,495; GS-15: \$76,456 – \$99,397). For information on research program and/or position, contact **Dr. Richard Soper**, Associate Area Director, at (706) 546-3311. For information on application procedures, contact **Karen Lee**, USDA, ARS, SAA, Cotton Quality Research Station, at (864) 656-2487. Applications in response to this advertisement should be marked ARS-D8S-8199 and sent to **Sharon Neafsey**, 5601 Sunnyside Avenue, Beltsville, MD 20705-5105. Applications must be postmarked by June 22, 1998.

USDA/ARS IS AN EQUAL OPPORTUNITY EMPLOYER

## CHEMIST

Founded in 1987 by the late David Packard, MBARI is a nonprofit, private oceanographic research institute, uniquely dedicated to the development of state-of-the-art equipment, instrumentation, systems, and methods for scientific research in the deep waters of the ocean. Located in Moss Landing, California, MBARI's research center includes science and engineering laboratories, as well as an operations facility to support our two research vessels. The Institute deploys a remotely operated vehicle (ROV) to depths of 1500m in Monterey Bay for the purpose of scientific investigation, and is currently introducing an advanced ROV with an operating depth of 4000m.

MBARI is currently seeking applications from individuals with proven experience in the area of marine chemistry or chemical oceanography. Applicants should have experience and interest in elucidating biogeochemical processes and mechanisms through developing and implementing new technologies for *in situ* field research and an ability to effectively utilize MBARI's unique resources, including its research vessels and ROVs. Possible areas of interest include, but are not necessarily limited to, sources or sinks of macronutrients or trace metals in the oceans; vent, seep, or pore fluid geochemistry; or the dynamics of accumulation or diagenesis of organic material in sediments.

Qualifications: Ph.D. or equivalent experience in the physical or biological sciences, and at least four years postgraduate experience (or equivalent) using ROVs, submersibles, or moorings as primary data sources is required. Must have demonstrated ability to conduct independent research of high quality in the ocean sciences. Ability to work cooperatively in a research institution setting is required. Must possess excellent communication skills and be able to work effectively with diverse groups of people. Must be able and willing to go to sea for specified duration.

Applications should include an updated curriculum vitae, a statement of research interests, and the names and addresses of four professional references. Applications should be submitted prior to June 1, 1998. The preferred starting date is between January 1999 and July 1999. Please respond to MBARI, Human Resources, Job Code: Chemistry, P.O. Box 628, Moss Landing, CA 95039-0628, or fax to (408) 775-1620.

EOE. MBARI welcomes diversity.

# POSTDOCTORAL FELLOWSHIP

## IN NEW DRUG DEVELOPMENT

The Department of Clinical and Scientific Affairs (CSA), Pfizer Central Research, New York City announces its annual competition for a Postdoctoral Fellowship in New Drug Development.

The Department of Clinical and Scientific Affairs has a broad range of activities. It is responsible for designing and conducting clinical development programs for Pfizer-discovered compounds, as well as investigating and developing new claims and indications for marketed compounds. CSA also designs and conducts clinical development programs for new formulations and dosage forms of existing products.

This fellowship program is designed to provide diverse scientific training in the process of new drug development. The postdoctoral fellow will become a member of a pharmaceutical project team, and gain experience in the design and implementation of clinical research programs. While no laboratory or clinical studies are actually conducted at Pfizer in New York, the fellow will interact with specialists in his/her chosen field to have studies performed at contract laboratories, universities, and with individual investigators.

One fellowship will be awarded for clinical research related to new drug development in one of the following areas: allergy, central nervous system, gastroenterology, microbiology/infectious disease, and urology. Candidates should possess a doctoral degree (eg PhD), have a broad background in pharmacology/ physiology, have no more than one year of non-industry postdoctoral experience, and **be authorized to engage in employment in the US**. Some prior experience with clinical trials or the drug development process is desirable, but not a prerequisite. Salary will be based on qualifications and experience.

Initial applications should include: 1) curriculum vitae containing education and training, research experience, awards, and a list of publications; 2) a statement describing research interests and experience, and how the proposed postdoctoral fellowship training relates to career goals; 3) one scientific reprint, which best describes the applicant's research results. The deadline for application is Friday, May 1, 1998.

For prompt consideration, please submit a scannable (no italics, graphics or staples) resume to: **Pfizer Inc, Employee Resources, Attn: Gianni Amato, 235 East 42nd Street, 13th floor, Mail Stop #17A, New York, NY 10017. Please indicate Reference Ad Code # 98-0002908 on both resume and envelope.** Pfizer is an equal opportunity employer.



## INTERNATIONAL ENVIRONMENTAL EDUCATION OPPORTUNITIES

### Assistant Education Director

The School for Field Studies, the oldest and largest educational institution in the US devoted to teaching and engaging university students in environmental problem solving around the globe, is seeking applicants for the position of Assistant Education Director in Beverly, MA, USA. This position will support the development and administration of the academic programs at our Centers abroad in order to ensure that they meet the mission of the School. Additionally, the Assistant Education Director monitors and evaluates programs to ensure compliance with academic standards and program quality. Qualified candidates will have a Ph.D. in Environmental Science or related field; demonstrated and relevant academic, research and field experience abroad; a minimum of two years university teaching and curriculum development experience; a demonstrated ability to coordinate and be part of an interdisciplinary team; and the ability to travel internationally (20%) to support academic programs.

To apply, send cover letter expressing your interests and experience with a CV to:



**The School for Field  
Studies**  
16 Broadway,  
Beverly, MA 01915, USA  
Fax: 1-978-927-5127

E-mail: dsadam@gte.net EOE



### CHANCELLOR UNIVERSITY OF NEBRASKA MEDICAL CENTER and VICE-PRESIDENT UNIVERSITY OF NEBRASKA

The University of Nebraska invites applications and nominations for the position of Chancellor of the University of Nebraska Medical Center (UNMC) and Vice President of the University of Nebraska. The Chancellor is the chief administrative officer of a modern, innovative medical center which is a major health resource for the State of Nebraska and surrounding region. In certain targeted areas, such as liver, small bowel, and bone marrow transplantation and cancer research, UNMC is a national resource.

The Chancellor of the medical center is appointed by and reports to the President of the University of Nebraska. Responsible for providing leadership for all instructional, research and service programs of UNMC, the Chancellor also is expected to develop and maintain effective relationships with all appropriate constituencies.

One of four campuses of the University of Nebraska, which has a total enrollment in excess of 46,000, UNMC serves some 2,600 students in colleges of medicine, nursing, pharmacy and dentistry and a School of Allied Health. In addition, UNMC offers graduate studies and research opportunities in a variety of basic science, medical science, and health care areas. The Nebraska Health System, a newly created entity combining University Hospital and Clarkson Hospital, is a major midwest referral center. UNMC's Eppley Institute for Research in Cancer and Allied Diseases is a designated cancer research center of the National Cancer Institute. The Munroe-Meyer Institute is a center for the diagnosis and treatment of children and adults with developmental, genetic, physical and emotional disabilities.

The University seeks an individual with demonstrated leadership ability, a record of excellence in intellectual and academic performance, significant administrative experience in higher education and a personal commitment to education and research. An earned doctorate is desirable. A commitment to Affirmative Action is essential.

Initial screening of candidates will begin on or about June 1, 1998, and will continue until the position is filled. Applications and nominations should be submitted to:

**Rowen K. Zetterman, M.D.**

**Chairman**

**UNMC Chancellor Search Committee**

**University of Nebraska Foundation**

**8712 W. Dodge Road, Suite 402**

**Omaha, NE 68114**

*The University of Nebraska is an Affirmative Action, Equal Opportunity Employer that actively seeks and encourages nominations and expressions of interest from women and minorities.*

Genome Systems, Inc., a wholly owned subsidiary of Incyte Pharmaceuticals, Inc., is a leader in providing genetic engineering products, reagents and services for the general scientific community.

### Microinjectionist

Genome Systems, Inc. has an immediate opening for a Microinjectionist. This position would be responsible for embryo production, blastocyst injection, surgical transfer to recipient mice, and tracking offspring. Additional responsibilities include customer updates, writing and submission of animal care and use protocols, attendance at and participation in IACUC meetings. This position is 60% laboratory and 40% administrative. B.S. degree in biology required, Masters degree a plus. Position requires 2 - 4 years of experience, good communication and interpersonal skills. Demonstrated experience in ES cell culture a plus.

If you recognize these qualities in yourself, we want to hear from you! We offer competitive salaries, an outstanding benefits package and significant opportunities for professional growth. Mail/fax your resume to Human Resources Dept., Genome Systems, Inc., Job #1379, 4633 World Parkway Circle, St. Louis, MO 63134 FAX (314) 506-6421. An Equal Opportunity Employer, M/F/V/D.





## Parke-Davis/Wayne State Postdoctoral Partners You with Cutting-Edge Research Opportunities

### Postdoctoral Program in Molecular Therapeutics

Be part of this unique joint program between Parke-Davis' Cell Biology Department and Wayne State University's Department of Psychiatry and Behavioral Neurosciences and participate in cutting-edge signal transduction research in therapeutic areas of diabetes, obesity and neuropsychiatric disorders.

Exciting opportunities are available for enthusiastic, highly-motivated individuals with strong backgrounds in molecular and cell biology who are recent M.D. or Ph.D. graduates interested in working in an interdisciplinary industry/academic environment.

Enjoy research positions in the laboratories of these distinguished professionals:

**Rodrigo Andrade** - Cellular neurophysiology, organization and regulation of G-protein-mediated signaling.

**Michael Bannon** - Dopaminergic signaling, regulation of gene expression in dopamine neurons.

**James Granneman** - Neural control of metabolism, organization and regulation of G-protein-mediated signaling.

**Todd Leff** - Regulation of transcription by hormonal and metabolic signals.

**Robert MacKenzie** - Central and peripheral mechanisms of body weight regulation, organization and regulation of G-protein-mediated signaling.

**Alan Saltiel** - Mechanisms of insulin action, protein kinases and phosphatases.

Pursue a Postdoctoral in Molecular Therapeutics with the best names in cutting-edge research: Parke-Davis and Wayne State University.

Qualified candidates mail, fax or e-mail a scannable resume\* to: **Parke-Davis Resume Processing Center, P.O. Box 92242, Los Angeles, CA 90009-2242.**  
Fax: (310) 337-3367.  
Job Code-RJB-974164.  
E-mail: [parkedavis@lsearch.com](mailto:parkedavis@lsearch.com)

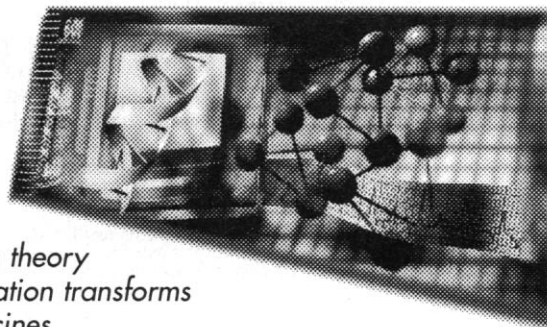
Equal opportunity in action.  
Smoke-free work environment.

\*Please submit resume on laser-quality white paper, with legible 10 point or larger type, and avoid boldface, italics, borders, etc.



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to practical application transforms  
molecules to medicines.*

## CHEMICAL PROCESS RESEARCH AT SCHERING-PLOUGH

At Schering-Plough's Chemical Process Research Facilities in Kenilworth and Union, NJ, scientists skillfully perfect innovative and cost-effective methods to bring quality pharmaceutical products to market. In this technologically advanced environment, you will provide the vital link between discovery and manufacturing.

### SENIOR SCIENTISTS Chemical Process R & D

We seek creative Organic Chemists to join our Process Research Laboratories. As a member of a professional research team, you will have a unique opportunity to utilize your multidisciplinary skills in the development of new processes to target compounds as well as improve existing processes. To qualify, you will need a PhD in Organic Chemistry with a strong background in Organic Synthesis and 1-4 years of postdoctoral or industrial experience. Expert bench skills with modern and classical synthetic and analytical techniques and instrumentation (HPLC, NMR, MS, IR, etc.) are required. The ability to perform independent research and excellent communication, interpersonal and documentation skills are essential. To be considered for these positions, please reference Dept. CD98A-BS.

### ASSISTANT/ASSOCIATE SCIENTISTS Chemical Process R & D

As a member of a team of respected research professionals, you will be involved in research to discover new syntheses for drug candidates. This will include performing laboratory experiments leading to the invention and optimization of organic reactions for the manufacture of pharmaceutical compounds. To qualify, you will need a BS degree in Chemistry and 0-4 years of experience in Synthetic Organic Chemistry; or an MS in Organic Chemistry and 0-2 years of related experience. Knowledge of spectroscopic and analytical techniques such as NMR, IR and HPLC is desirable. To be considered for these positions, please reference Dept. CD98B-BS.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to apply on-line at <http://www.sp-research.com> or send a scannable resume and cover letter, original copy only, referencing the Dept. Code for your position of interest, to: Schering-Plough Research Institute, MS #1250, 2015 Galloping Hill Road, Kenilworth, NJ 07033-0539. We are an equal opportunity employer. *We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.*



**Schering-Plough  
Research Institute**

**Using Science for Human Advantage**

MYRIAD GENETICS, INC.

#### EMPLOYMENT OPPORTUNITIES

Salt Lake City, UT

Myriad Genetics is an innovative genomics company focused on the isolation of significant disease-causing genes. Our scientific achievements include elucidating the role of the p16 tumor suppressor gene in cancer and identifying genes involved in breast, ovarian, and brain cancer. We currently have major programs in asthma, cancer, central nervous system disorders, coronary heart disease, obesity, and osteoporosis. Expansion of our gene identification and characterization efforts provides a number of exciting opportunities for highly-motivated individuals. To learn more, visit our web page at: [www.myriad.com](http://www.myriad.com).

#### Project Director:

A scientist is needed with extensive experience in DNA biochemistry with recent managerial experience implementing new technologies. Other qualifications which will be considered include: an understanding of laboratory information management software and general computer competency, experience in a production environment, implementing quality control, quality assurance and GLP programs. Will manage a group performing technology development in both biochemistry and robotics. Ph.D. with 5 or more years of experience required.

#### Scientists:

The Technology Development group has a need for scientists with technical experience in DNA enzymology and practical applications including PCR, Sequencing, Genotyping or other diagnostic DNA assays. Projects will include efforts to add reliability and robustness by optimization of protocols and reagents and reduce costs by miniaturizing reactions using microfluidics. Experience in optimization and the interrelationships of complex processes and the utilization of robotics for massive throughput will be considered. The successful candidate will possess a Ph.D. or equivalent in molecular biology or genetics and 2 - 5 years of relevant post-doctoral experience.

We offer an attractive compensation package and a stimulating, interactive research environment. Please mail or fax a cover letter, specifying position of interest, a complete resume, and the names of three professional references to: Human Resources Department, Myriad Genetics, Inc., 320 Wakara Way, Salt Lake City, UT 84108. Fax: 801-584-3640.

Equal Opportunity Employer



## Agricultural Research Service U.S. Department of Agriculture

is seeking candidates to fill more than  
**100 Scientific Vacancies**

**Come work where the future is growing**

Would you like a career where your work could touch the lives of every person—where your work could open up a new multi-million dollar export market for U.S. crops; where you could discover ways to make industrial products from renewable resources; where you could help ensure that we always have a safe, nutritious, abundant food supply and a quality environment?

If this sounds like your type of career, consider a research scientist's position with the Agricultural Research Service (ARS), the U.S. Department of Agriculture's principal in-house research agency.



Vacancies exist in many disciplines

**Horticulture  
Plant Physiology  
Animal Genetics  
Plant Genetics  
Chemistry  
Microbiology  
Nutrition**

**Food Technology  
Veterinary Medicine  
Entomology  
Animal Science  
Agricultural Engineering  
Molecular Biology  
Soil Science**

...and many others

**Visit the ARS Vacancy Web Site**

for vacancy announcements and application procedures

**[www.ars.usda.gov/afm/hrd/resjobs](http://www.ars.usda.gov/afm/hrd/resjobs)**

ARS has more than 100 locations throughout the United States. The Agency offers a competitive scientific environment, excellent benefits, and opportunity for advancement.

**ARS is an equal opportunity employer**

Many vacancies close May 6





Pharmacia & Upjohn is one of the world's largest pharmaceutical companies. We are involved in areas such as Oncology and Infectious, Metabolic, and Central Nervous System Diseases to help people live longer and fuller lives. If you would like an opportunity to make a difference with Pharmacia & Upjohn, contact us.

## Molecular Biologist

The selected candidate will contribute to the discovery of drugs to treat central nervous system disorders through the identification and functional characterization of new targets. This will involve cDNA cloning, expression in heterologous systems, and development of assays to study protein function and to screen for compounds active against the target. Experience with RNA isolation, PCR, cDNA cloning and sequencing, and expression of proteins in bacteria or mammalian cells is required. Experience with single-cell PCR, site-directed mutagenesis, northern blotting, immunoblotting, purification of recombinant proteins, intensive computer analysis of DNA and protein sequences and databases, or DNA array technologies would be advantageous. Applicants must have a Bachelor's or Master's degree in Biochemistry, Molecular Biology, or a related field. Excellent communication skills and the ability to work successfully as part of a team are required. **Position #980198**

## Fungal Molecular Biologist

The selected candidate will be involved in the application of genomic technologies such as microarrays and database mining in an effort to discover novel anti-fungal molecular targets. Application of these targets to drug discovery will then involve propagation and molecular manipulation of fungi, including DNA cloning, recipient host construction, and expression analysis.

Applicants must have a Master's degree (or equivalent) in Molecular Biology, Microbiology, or Biochemistry or an equivalent combination of education and experience. Experience in yeast or fungal molecular biology is required. Training in genetics, experience with *Candida* and *Aspergillus*, and experience with DNA and protein databases are desirable. The ability to thrive in a team-based setting is required. **Position #980197**

At Pharmacia & Upjohn you can make a difference. Not only for the sake of your career, but also for the millions of people around the world whose lives will be enhanced by the solutions you help us provide. Pharmacia & Upjohn offers a competitive salary and benefits. For confidential consideration, please send your resume with appropriate Position # to: Pharmacia & Upjohn, Recruiting, 5045-88-81, 7000 Portage Road, Kalamazoo, MI 49001. You may e-mail your resume (no attachments, please) to: recruit@am.pnu.com. We are an equal opportunity employer with a commitment to workplace diversity.



Pharmacia & Upjohn

## Faculty Position

### Department of Pharmaceutical Sciences

Northeastern University seeks applications and nominations for a tenure-track

position at the **Assistant or Associate Professor** level in the Department of Pharmaceutical Sciences, Bouve College of Pharmacy and Health Sciences. The Department is the preclinical component of the Pharmacy Program, and houses the Ph.D. program in Biomedical Sciences. Northeastern University is a Carnegie II Research Institution, and benefits from its central Boston location. A competitive package of salary, benefits, and support facilities will be provided.

Applicants must have a Ph.D. or equivalent degree, and have the potential for, or already achieved, a well-funded research program. Teaching responsibilities include **BIOCHEMISTRY**. A background in an area of pharmaceutical science such as medicinal chemistry, pharmaceutical biotechnology, pharmaceuticals or toxicology is preferred.

Applicants should submit a curriculum vitae, a letter describing their qualifications, research interests, and three letters of recommendation to: **Roger W. Giese, Bradstreet Professor and Search Committee Chair, Mugar Building Room 122, Northeastern University, Boston, MA 02115. Telephone: 617-373-3227; FAX: 617-373-8720; Email: rgiese@lynx.neu.edu.** Applications received by June 12, 1998 will be given full consideration.

Northeastern University is an Affirmative Action/Equal Opportunity/Title IX Employer. Women and minorities are encouraged to apply.



**Northeastern University**

## Postdoctoral Position Epithelial Cell Biology

Two postdoctoral positions are available in the Laboratory of Epithelial Cell Biology at the Alfred I. duPont Hospital for Children in Wilmington, DE. The primary focus of the laboratory is the regulation of chloride channel activity in cystic fibrosis and the biochemical basis for the relationship between the loss of CFTR activity and CF pathophysiology.

The first position involves studies of kinase-dependent activation of normal and mutant forms of the CFTR. Expertise in electrophysiology (patch clamping or two-electrode voltage clamping), cell culture and molecular biology is required. Experience with protein labeling would be helpful.

The second position involves studies of antibacterial activity by normal and CF airway cells. Expertise in mammalian and bacterial cell culture is essential. Experience with ion transport electrophysiology would be helpful.

The Alfred I. duPont Hospital for Children is the pediatric teaching hospital for Thomas Jefferson University and the laboratory of Epithelial Cell Biology is part of the Department of Pediatrics. Competitive salary and benefits plans are offered. For consideration, indicate the position and send a curriculum vitae with the names of three references and salary requirements to **Dr. William Reenstra, Department of Clinical Science, duPont Hospital for Children, PO Box 269, Wilmington, DE 19899 (Fax 302-651-6881).** EOE/AA

ALFRED I.  
**duPont**  
HOSPITAL FOR CHILDREN



## New York University

### DIRECTOR, ELECTRON MICROSCOPY & IMAGING FACILITY

The Department of Biology at New York University invites applications for a Clinical Assistant Professor (non-tenure-track faculty line) to manage a modern, well-equipped facility consisting of 2 TEM's, 2 SEM's, image analysis, specimen preparation and related resources, within a dynamic nationally-ranked research and teaching department. Position begins September 1, 1998, pending final administrative and budgetary approval. Responsibilities include administering the facility, assisting faculty and students with research involving imaging, and teaching laboratory courses in electron microscopy at both undergraduate and graduate levels. Ph.D. required in relevant discipline, and 3 to: 5 years direct experience with electron microscopy in a biological science. Send curriculum vitae and names of 3 references to **Chairman, Department of Biology, New York University, 1009 Main Building, 100 Washington Square East, New York, NY 10003.**

NYU encourages applications from women and members of minority groups.

## RESEARCH FACULTY POSITION BIOCOMPUTING

The Department of Biological Sciences invites applications for a faculty position as Assistant Professor; salary range is \$40,238 to \$57,266. The position is available July 1, 1999 and is open to applicants with a strong background in computational biochemistry or molecular simulations (PhD degree, at least three years of postdoctoral experience, and a record of productive, high quality research.) As a member of the Division of Biochemistry, the successful candidate will establish an active, externally funded research program in the area of protein modeling and/or protein interactions. Individuals with interests or experience in teaching courses in biocomputing and bioinformatics are encouraged to apply. The candidate must compete successfully for salary and establishment grant support from the Alberta Heritage Foundation for Medical Research and/or the Medical Research Council of Canada, and will have 75% of his/her time protected for research.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary respects, appreciates and encourages diversity.

Please send a complete application as follows: A curriculum vitae and e-mail address; a concise outline of research plans; copies of maximally three representative publications; and a statement of teaching interests and philosophy. Please arrange to have three letters reference forwarded by the closing date of June 8, 1998. Send application package to:

**Dr. A.P. Russell, Department of Biological Sciences, University of Calgary, 2500 University Drive NW, Calgary Alberta T2N 1N4**  
Fax: (403) 289-9311

<http://www.ucalgary.ca/UofC/faculties/SC/B1/biochem>

**UNIVERSITY OF  
CALGARY**

## Metabolic Diseases Post Doctoral Position Signal Transduction/Insulin Action

Pfizer scientists are involved in some of the most critical research in the world today. As a Fortune 100 company, we have established a product pipeline that is unparalleled, and an intellectual, collaborative environment that inspires scientific achievement. Join us and become a part of the cure.

In addition to a fast-paced, yet collegial environment, we offer very competitive salaries and excellent benefits including relocation assistance. For confidential consideration, please forward resume to: **Employee Resources, Pfizer Inc, Job Code # \_\_\_\_\_, Central Research Division, Eastern Point Road, Groton, CT 06340.** For more information about Pfizer, see us on the Internet at: <http://www.pfizer.com>. We are an equal opportunity employer M/F/D/V.

We seek a scientist interested in a Post-Doctoral opportunity targeted at understanding the molecular basis of impaired insulin receptor signal transduction observed in insulin resistant states. These studies will focus on the interactions of the insulin receptor and related receptors with insulin receptor substrate (IRS) proteins. Biochemical and molecular biological approaches will be used to study these interactions and their relationship to insulin receptor kinase activity.

This position will be 36 months in length, with the first 18 months to be spent at Pfizer in the lab of Dr. Robert Garofalo and the second 18 months to be spent at the National Institutes of Health in the lab of Dr. Simeon Taylor. This jointly sponsored position offers a unique opportunity to experience the research environments of both a leading pharmaceutical company and the National Institutes of Health. Experience with a variety of biochemical and molecular biological techniques is preferred. **Job Code: 2582**

## BS/MS Synthetic Organic Chemists

You will conduct synthesis, purification and characterization of novel, small molecule biological effectors toward the research of cancer, immunology, infectious diseases, cardiovascular and metabolic diseases and neurosciences. Qualified candidates will have a BS or MS in a relevant field, strong academic achievements and excellent communication and interpersonal skills. Knowledge and experience in isolation, separation and purification techniques utilizing IR, NMR, and Mass Spectroscopy as analytical tools are required. Research experience highly desirable. **Job Code: 2583**



We're part of the cure.

## ASSISTANT DIRECTOR CYTOGENETICS LABORATORY

Immediate position available for a: Ph.D. or M.D. eligible or recently certified in clinical cytogenetics by the American Board of Medical Genetics. Experience in the cytogenetics of all specimen types and fluorescence in situ hybridization. Research experience and publications in human cytogenetics also required. Please send inquiries to:

**Linda M. Pasztor, Ph.D.**  
**Biomolecular Laboratories**  
**The Children's Mercy Hospital**  
**2401 Gillham Road**  
**Kansas City, MO 64108**  
or  
**E-mail: lpasztor@cmh.edu**

EOE



## BIOLOGIST

Founded in 1987 by the late **David Packard**, MBARI is a nonprofit, private oceanographic research institute, uniquely dedicated to the development of state-of-the-art equipment, instrumentation, systems, and methods for scientific research in the deep waters of the ocean. Located in Moss Landing, California, MBARI's research center includes science and engineering laboratories, as well as an operations facility to support our two research vessels. The Institute deploys a remotely operated vehicle (ROV) to depths of 1500m in Monterey Bay for the purpose of scientific investigation, and is currently introducing an advanced ROV with an operating depth of 4000m.

MBARI is currently seeking applications from individuals with proven experience in the area of deep water marine biology or biological oceanography. Applicants should have experience and interest in marine ecology or physiological ecology, in developing and implementing new technologies for *in situ* field research, and an ability to effectively utilize MBARI's unique resources, including its research vessels and ROVs. Possible areas of interest include, but are not necessarily limited to, zooplankton ecology, benthic biology/ecology, and physiology.

Qualifications: Ph.D. or equivalent experience in the physical or biological sciences, and at least four years postgraduate experience (or equivalent) using ROVs, submersibles, or moorings as primary data sources is required. Must have demonstrated ability to conduct independent research of high quality in the ocean sciences. Ability to work cooperatively in a research institution setting is required. Must possess excellent communication skills and be able to work effectively with diverse groups of people. Must be able and willing to go to sea for specified duration.

Applications should include an updated curriculum vitae, a statement of research interests, and the names and addresses of four professional references. Applications should be submitted prior to June 1, 1998. The preferred starting date is between January 1999 and July 1999. Please respond to **MBARI, Human Resources, Job Code: Biologist, P.O. Box 628, Moss Landing, CA 95039-0628, or fax to (408) 775-1620.**

EOE

MBARI Welcomes Diversity.



Since 1992, Ontogen has established itself as a leader in the development of automated organic synthesis technologies. Well established, but still privately-held, we have created significant patented and proprietary technologies, as well as a formidable small molecule compound library. We have a proven track record of large pharmaceutical company interaction, with three current research collaborations. Our mission is to utilize modern tools of combinatorial chemistry, structure-based design, and biology to discover and develop small molecule therapeutics. We currently have the following opening at our research facility, located in Carlsbad, just north of San Diego:

## Research/Principal Scientist

The successful candidate will develop and run high-throughput primary and secondary assays for small molecule inhibitors of tumor angiogenesis and/or inducers of tumor endothelial apoptosis. You will work closely with chemists, information systems specialists and engineers, using state-of-the-art molecular modeling, combinatorial chemistry and SAR technologies. Requirements include a Ph.D. with post-doctoral experience in a biological science, plus 2-8 years' biotechnology or pharmaceutical company experience in drug discovery. Educational background and/or industry experience in cancer biology is also required. Experience in tumor angiogenesis or apoptosis is highly desirable. Good communication skills and the ability to work well in a multi-disciplinary team environment are essential. (Job Code: r/ps1sci)

Ontogen offers competitive compensation and benefits packages, including a stock option plan. Interested candidates should send, e-mail or fax resume to: **Ontogen Corporation, Human Resources, 6451 El Camino Real, Carlsbad, CA 92009; E-mail: hr@ontogen.com; Fax: (760) 930-0200.** All submittals must be identified with Job Code. No phone calls please. Ontogen Corporation is an Equal Opportunity Employer.

**Ontogen Corporation**

## EXECUTIVE DIRECTOR INSTITUTE OF MEDICINE

The Institute of Medicine (IOM) is a national institution which addresses matters effecting the advancement of health science and education and the improvement of health care, in conjunction with the National Academy of Sciences (NAS) and the National Research Council (NRC). The IOM is a major resource of expertise and analysis of issues and problems in these areas. It has a staff of approximately 120, including 75 professionals supporting the work of its volunteer committees and national membership of approximately 1,000.

The Executive Officer implements the policies of IOM's elected officials and the NRC through management of all IOM operations, including scientific, financial, administrative, and membership matters. Through coordination and supervision of Division Directors, the Executive Officer manages IOM's human resources, identifies emerging problems and opportunities for policy analyses, responds to public and private requests for studies, enforces IOM and NRC policies, and ensures compliance with contracts.

Applicants should have a M.D./Ph.D. or equivalent, preferably in a medical or health science field, and at least 10 years of highly substantive related experience, or M.A./M.S./M.B.A./M.P.A. or equivalent and approximately 15 years of experience. Qualifications also include recognized expertise in relevant areas of health care or medicine, demonstrated effectiveness in management of major programs of research or policy analyses, and demonstrated oral and written communication ability with staff and a broad constituency of research, government, academic, and committee members.

Applicants are invited to submit a CV/resume in confidence to:  
**Sr. Advisor for Human Resources,  
GR 146, National Research  
Council - Institute of Medicine, 2101  
Constitution Avenue, NW,  
Washington, DC 20418; EOE.  
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Fax: 44 (0) 1223 576 208  
E-mail: [european\\_ads@science-int.co.uk](mailto:european_ads@science-int.co.uk)

# Tenure-Track Positions Assistant Professor Equivalent

## Cellular Immunologist

The Laboratory of Intracellular Parasites seeks a cellular immunologist to conduct independent investigations on chlamydial mucosal infection and immunity. The long-term goals of this work are aimed at the development of an efficacious vaccine for the prevention or control of sexually transmitted diseases of humans caused by *Chlamydia trachomatis*.

Qualified candidates must have a doctoral degree and a minimum of two years postdoctoral training in cellular immunology. Preference will be given to qualified candidates that have experience in the pathogenesis of infectious diseases. Please submit applications to Pat Stewart, Chief, Administrative and Facilities Management (OE-133), NIAID, Rocky Mountain Laboratories, 903 South 4th Street, Hamilton, MT 59840. Deadline date is June 1, 1998.

## Obesity Physiologist

The NIDDK is searching for a tenure-track scientist in the field of human obesity physiology. The position is in its Phoenix Epidemiology and Clinical Research Branch. Applicants must have research experience and scientific accomplishments in the physiology of human energy balance. The obesity physiologist will be expected to pursue an

independent research program as well as collaborate with a multidisciplinary group of scientists studying causes of human obesity and type-2 diabetes. The Branch is located in Phoenix, AZ. Please submit applications to Simeon Taylor, MD/PhD, Chair, Search Committee, Diabetes Branch (OE-133), NIDDK, Building 10, Room 9S211, 10 CENTER DR MSC 0810, BETHESDA MD 20892-0810. Deadline date is June 1, 1998.

## To Apply

Please send a cover letter, *curriculum vitae*, bibliography, a one- to two-page statement of research interests and goals, and selected publications to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three references who can provide an evaluation of your professional qualifications.

## WWW Site

Visit the NIH Office of Education web site listing tenure-track positions, postdoctoral positions, and much more. Converse by e-mail with NIH investigators and apply electronically. Find us at <http://www.training.nih.gov>

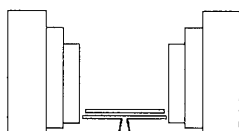


## National Institutes Of Health

### Office Of Education

<http://www.training.nih.gov>

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## THE SALK INSTITUTE

A postdoctoral position is available at The Salk Institute for Biological Studies in a program involving the molecular, cellular and physiological aspects of the control of gene transcription and hormone release by alcohol in isolated cells and wild-type or mutant rodents. This position offers an opportunity to obtain training in a multidisciplinary group that focuses on both modern molecular techniques and whole animal physiology. Applicants must be citizens of the United States of America or permanent residents to qualify for this training grant position, and must have obtained their Ph.D. within the last 2 years.

Please send curriculum vitae, three letters of recommendation and a summary of research interests to:

**Dr. Catherine Rivier**  
The Salk Institute  
Peptide Biology Lab  
10010 N. Torrey Pines Rd.  
La Jolla, CA 92037

The Salk Institute is an Equal Opportunity Employer.

[www.salk.edu](http://www.salk.edu)

## SCIENCE ADMINISTRATOR (Biomedical Research)

The National Institutes of Health, Office of Intramural Research, Bethesda, MD, invites applications for the position of Science Administrator (Biomedical Research), 601/602, salary range currently is \$61,656 - \$101,142 per annum. The salary may vary depending on the individual's qualifications and the appointment mechanism utilized.

Assists the Deputy Director for Intramural Research (DDIR) in overseeing, evaluating, and maintaining the high quality of research and training in NIH's laboratories and clinics. Oversees the external review of all intramural research labs. Analyzes research programs and research directions, recommends redirection strategies, proposes new programs and provides policy guidance to the DDIR. Develops testimony on intramural research and serves as the DDIR's representative and emissary on a variety of intramural research committees and projects. Reviews the credentials of scientists being considered for appointment and promotion in the NIH Intramural Research Program and makes recommendations to the DDIR.

Applicants must possess an M.D., Ph.D. or equivalent in medical, or related health sciences, plus subsequent medical/health research experience that demonstrates the following: (1) ability to independently define, design and pursue research as evidenced by a record of published research accomplishments; (2) broad and deep understanding of ethical and professional standards for the conduct and review of biomedical research; (3) ability to evaluate the professional/technical/scientific standards, process, and effective conduct of contemporary biomedical research; (4) ability to resolve disputes requiring scientific knowledge that may hinge on highly technical biomedical issues; and (5) excellent oral, written and small group communication skills.

Submit an application in the format of your choice, including CV or resume, and bibliography. Applicants are requested to submit three (3) letters of reference. The Vacancy Announcement, OD-98-2024, which lists the qualifications required, factors considered in candidate selection, and the procedures for applying for this position, may be obtained by calling (301) 402-4111 (Reference Fax ID: 2024). The TDD phone number is (301) 402-1970. The announcement closes June 30, 1998. Please mail applications to: National Institutes of Health, Office of the Director, Executive Office, BMSO-A, Attn: Ms. Rosa Duarte, Bldg. 1, Rm. 332, 1 Center Drive, MSC 0182, Bethesda, MD 20892-0182. Applications must be postmarked by June 30, 1998.

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## POSITIONS OPEN

### WATER AND HEALTH JOHNS HOPKINS UNIVERSITY

The Department of Environmental Health Sciences of the Johns Hopkins University School of Hygiene and Public Health seeks to appoint several faculty members with academic backgrounds and experience in the field of environmental health engineering with emphasis on the relationship of water supply and the water environment to public health. In cooperation with faculty in Public Health and in Environmental Engineering, successful applicants are expected to participate in developing a research and teaching program in the broad field of water and health. The program is expected to have close ties with fields such as engineering, toxicology, epidemiology, molecular biology, and international health well-represented at the University. Rank remains open but preference will be given to appointments at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. Applicants are requested to send a curriculum vitae and names of three referees by June 12, 1998, to:

M. Gordon Wolman

Division of Environmental Health Engineering  
Department of Environmental Health Sciences  
School of Hygiene and Public Health  
Johns Hopkins University  
615 North Wolfe Street, Room 6010  
Baltimore, MD 21205

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

### ASSISTANT PROFESSOR

The Department of Immunology and Infectious Diseases at the Harvard School of Public Health is seeking an Assistant Professor. The successful candidate will be expected to engage in a combination of research and teaching at the graduate level. Applicants should have a doctoral degree and evidence of postdoctoral research experience in molecular immunology with strong emphasis on gene transcription. The successful candidate will be expected to conduct research and teaching in the area of cytokine gene regulation. Applicants should send a statement of research interests, curriculum vitae, and names and addresses of three references to:

Dr. Tun-Hou Lee

Chair, Search Committee

Department of Immunology and Infectious Diseases  
Harvard School of Public Health  
651 Huntington Avenue MB: FXB/DIID3  
Boston, MA 02115

*Harvard University is committed to increasing the number of women and minorities in its faculty and especially encourages applications from such candidates.*

### INSECT PHYSIOLOGIST

**ASSISTANT/ASSOCIATE PROFESSOR** of entomology, 12-month tenure-track appointment. The successful candidate will develop an independent research program, and teach an introductory course in physiology of insects and an advanced course in area of interest. A Ph.D. in entomology or other biological science with research expertise in insect physiology is required. Submit letter stating research and teaching goals, curriculum vitae, transcripts of postsecondary education, reprints, and names and addresses of three references to: **Search Committee, Department of Entomology and Plant Pathology, Box 9775, Mississippi State, MS 39762-9775.** Deadline: June 15, 1998. For additional information contact: **Clarence Collison, Telephone: 601-325-2086; FAX: 601-325-8837; e-mail: chc2@ra.msstate.edu.** *MSU is an Affirmative Action/Equal Opportunity Employer.*

Neurobiology search extended. Drew University seeks **NEUROBIOLOGIST** for tenure-track, **ASSISTANT PROFESSOR** position to teach undergraduate courses and laboratories in neurobiology, and to coadvise the psychobiology major. Focus must be in biology rather than psychology or biochemistry. Starts September 1998. Qualifications: Ph.D., demonstrated excellence and interest in teaching, and commitment to research with undergraduates.

Send letter of application, curriculum vitae, three letters of reference, evidence of teaching excellence, and copies of select publications (maximum of three) to: **Psychobiology Search Committee, Department of Biology, Drew University, Madison, NJ 07940.**

Application deadline: May 15, 1998.

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

## POSITIONS OPEN

### ASSISTANT OR ASSOCIATE PROFESSOR (N OR P)

#### FOOD SAFETY

### Division of Environmental and Occupational Health School of Public Health University of Minnesota

This is a new faculty position (100 percent-time, 12-month, tenure or tenure-track) in the Division of Environmental and Occupational Health. Salary and rank will be commensurate with qualifications. The division is nationally recognized for strong academic specialties in environmental epidemiology, industrial hygiene, environmental policy, occupational and environmental medicine, occupational health nursing, environmental chemistry, environmental microbiology, and environmental toxicology. This position will expand the environmental microbiology specialty by adding the increasingly vital area of food safety. The successful applicant will develop an independent, externally funded research program, teach and advise Master's and doctoral students, and participate in outreach activities related to food safety. Qualifications include earned doctorate in related scientific discipline by date of hire, demonstrable research record relevant to food safety, and demonstrable teaching skills in food safety. Submit a curriculum vitae, a letter of interest, and names and addresses of three professional references to: **Donald Vesley, Ph.D., Chair, Search Committee, Division of Environmental and Occupational Health, School of Public Health, University of Minnesota, Box 807 Mayo, 420 Delaware Street S.E., Minneapolis, MN 55455.** Applications will be accepted through July 15, 1998, or until a final selection is made.

*The University of Minnesota is an Equal Opportunity Educator and Employer.*

### TENURE-TRACK ASSISTANT PROFESSOR

The Department of Physiology, College of Medicine, invites applications for a full-time tenure-track Assistant Professor position. The successful candidate will be a **MAMMALIAN PHYSIOLOGIST** who will develop an extramurally funded independent research program in the area of vascular biology and/or stroke. Initial support will be provided by the Howard Hughes Medical Research Resources Program for Medical Schools. Applicants must have a Ph.D., M.D., or equivalent, and postdoctoral experience in cellular/molecular approaches to physiological problems. The primary appointment will be in the Department of Physiology, with extensive interaction encouraged across departments of the Interdisciplinary Graduate Program in Biomedical Sciences at the Health Science Center. The candidate may complement current departmental and college strengths in the areas of hypertension, signal transduction, fetal/maternal physiology, neuroendocrinology, membrane transport and ion channels, developmental genetics, and other interests described at our website: <http://www.med.ufl.edu/phys/index.html>. Responsibilities will include participation in departmental teaching and educational programs. Submit a curriculum vitae, including a statement of research plans, and have three letters of reference sent to: **Dr. Bruce R. Stevens, Search Committee Chair, Department of Physiology, College of Medicine, University of Florida, P.O. Box 100274, Gainesville, FL 32610-0274.** Salary is negotiable. Application deadline is June 15, 1998, and anticipated start date is January 1, 1999. *Equal Employment Opportunity/Affirmative Action Employer.*

**CHAIR: SCHUBOT AVIAN HEALTH CENTER.** The Department of Pathobiology at Texas A&M University seeks applicants for the Schubot Avian Health Center Endowed Chair. Applicants should have a strong infectious disease background relating to an area of avian health, reproduction, management, genetics, or conservation. The successful applicant will have good interpersonal skills and will be expected to work toward increasing the Center's endowment and further developing the program to a nationally and internationally recognized level. Further information about the Department of Pathobiology is available on our website: <http://www.cvm.tamu.edu/vtpb>. Applications will be accepted until a suitable candidate is identified. Application procedure: applicants should submit a letter of application, curriculum vitae, and the names and addresses of three references to: **Schubot Search Committee, Department of Pathobiology, College of Veterinary Medicine, Texas A&M University, College Station, TX 77843-4467. Telephone: 409-845-5941; e-mail: mzemane@cvm.tamu.edu.** *Texas A&M is an Equal Opportunity Employer.*

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE RESEARCH SCIENTIST

The Division of Radiation Oncology at City of Hope National Medical Center/Beckman Research Institute is seeking a highly motivated individual to establish an independent program in radiation research. Requires a Ph.D. and experience in radiation biology. A strong interest in the areas of radioimmunotherapy of solid tumors, radiation-induced DNA damage, and/or radiation-chemotherapy interactions is highly desired. This individual would be expected to establish collaborations with ongoing research efforts both inside and outside the Division, which include programs in radioimmunotherapy, tumor immunology, molecular biology, bone marrow transplantation, gene therapy, and experimental therapeutics. The Division of Radiation Oncology is active in basic, clinical, and translational research, with particular emphasis in multimodality and multidisciplinary approaches to cancer therapy. The City of Hope is an NCI-designated Comprehensive Cancer Center and Charter Member of the National Comprehensive Cancer Network. Salary and benefits are competitive and commensurate with level of experience. Please send curriculum vitae to: **Jeffrey Wong, M.D., Chairman, Division of Radiation Oncology, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, CA 91010. E-mail: cohapply@smtplink.coh.org; FAX: 626-301-8182.** *Equal Opportunity Employer.*

### CHAIR

### DEPARTMENT OF BIOCHEMISTRY WAKE FOREST UNIVERSITY School of Medicine

Wake Forest University School of Medicine is seeking applications for the position of Professor and Chair of the Department of Biochemistry. The Department currently has 21 primary faculty members and strong research programs in protein structure and function, metabolism, and molecular biology. The Department has excellent medical and graduate school teaching programs. The successful candidate, in addition to having a nationally recognized research program, will have exceptional administrative and organizational skills to direct the Department's continued development and pursuit of academic excellence. Applications including a current curriculum vitae or nominations should be sent to:

Elizabeth Sherertz, M.D.

Associate Dean for Faculty Services

Wake Forest University School of Medicine  
Medical Center Boulevard  
Winston-Salem, NC 27157

*Wake Forest University School of Medicine is an Affirmative Action/Equal Opportunity Employer and especially encourages applications from women and minority candidates.*

### FACULTY POSITION CHILDREN'S HOSPITAL MEDICAL CENTER CINCINNATI, OHIO

The Division of Infectious Diseases is seeking an outstanding faculty member whose rank (**INSTRUCTOR** to **FULL PROFESSOR**) will be commensurate with qualifications. The candidate will be expected to collaborate in ongoing studies in rotavirus molecular genetics, immunology, and vaccine development as well as develop a funded and associated independent research program. The candidate will have a doctoral degree and a record of successful independent research in molecular virology or viral immunology.

Applicants should send a curriculum vitae and names of three references to: **Richard L. Ward, Ph.D., Division of Infectious Diseases, Children's Hospital Medical Center, 3333 Burnet Avenue, Cincinnati, OH 45229-3039. E-mail: wardd0@chmcc.org; FAX: 513-636-7682.**

### FACULTY POSITION

A tenure-track position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level is available. Preference will be given to an individual able to develop a strong independent research program yet able to interact with current faculty having research interests in aging, cancer, cardiovascular disease, or neurochemistry. Applicants should send a curriculum vitae, a statement of research interests, and the names of three references to: **Faculty Search Committee, Department of Biochemistry MS607, University of Kentucky College of Medicine, Lexington, KY 40536.** *The University of Kentucky is an Equal Opportunity Employer, and encourages applications from qualified women and minorities.*

**Two Openings for POST-DOCTORAL  
ASSOCIATES or RESEARCH SCIENTISTS  
in the area of Global Climate Modeling**

Massachusetts Institute of Technology's Center for Global Change Science (CGCS) seeks applicants with a Ph.D. in a field relevant to global climate modeling to participate in the research activities of MIT's Climate Modeling Initiative (CMI). The main goals of the CMI are to understand how the global climate system operates, to determine what the limits are to our ability to predict climate, to improve climate predictions and simulations of past climate on all time scales, and to provide a hierarchy of climate models for use by CGCS faculty and students in their research. There are two positions available, which can be filled at either the post-doctoral or starting research scientist level. We seek particularly candidates with degrees and experience in the fields of atmospheric science, oceanography, hydrology, or paleoclimate studies, and who have had experience with three dimensional models. Scientists with expertise in numerical and computational methods, physical parameterizations, diagnostics calculations, or model applications are all invited to apply. Salary will be commensurate with experience.

Interested candidates should send a copy of their curriculum vitae and names of three references to Prof. Peter Stone, MIT Room 54-1718, Cambridge, MA 02139-4307, USA. Further information may be obtained by contacting the CGCS office (tel: 617-253-4902, fax: 617-253-0354, e-mail: [globalchange@mit.edu](mailto:globalchange@mit.edu)), or by accessing its web site at <http://web.mit.edu/cgcs/www/>.



**NATIONAL CENTER FOR  
BIOTECHNOLOGY INFORMATION  
NATIONAL LIBRARY OF MEDICINE  
NATIONAL INSTITUTES OF HEALTH  
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
RESEARCH BIOLOGIST — GS-401-13**

The Information Engineering Branch of the National Center for Biotechnology Information seeks a Epidemiologist/Computational Biologist to develop software for producing, analyzing, displaying, and editing sequence alignments to facilitate the submission of population studies to GenBank and the usefulness of sequence data in NCBI public resources for retroviral epidemiology. Applications are invited from scientists having an M.D. or Ph.D. degree with significant years of postdoctoral experience. Applicants should have extensive knowledge of sequence alignment tools and algorithms, molecular population biology and epidemiology, and retrovirus biology. The position requires extensive experience with software development on UNIX, Macintosh, and MS windows using C in a production quality environment. *U.S. citizenship is required.* The salary will be in the range of \$51,000 to \$65,000 per year, depending on experience. Applications will be accepted if postmarked by 05/15/98. For further information please contact **Dr. James Ostell at (301) 496-2475**. Candidates should send applications including a curriculum vitae, bibliography, and the names, addresses, and telephone numbers of three referees directly to: **Chair Search Committee, James M. Ostell, Ph.D., National Center for Biotechnology Information, National Library of Medicine, NIH, Building 38A, Room 8N805, Bethesda, MD 20894 USA.**

*Selection for this position will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, sex, national origin, politics, marital status, physical or mental disability, age, or membership or nonmembership in an employee organization.*

*NIH is an Equal Opportunity Employer.*

**CELL MOTILITY  
CYTOSKELETON**

**Postdoctoral Positions  
University of Massachusetts Medical Center**

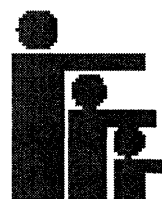
Postdoctoral research positions are available in a number of the highly interactive laboratories studying cell motility and/or the cytoskeleton. Investigators and their areas of interest include:

- Roger Craig:** Molecular structure and contractile mechanism of muscle
- Stephen Duxey:** Mitotic spindle and centrosome function, regulation, dynamics
- Mitsuo Ikebe:** Motor function of myosin superfamily, regulation of cell motility
- Stephen Lambert:** Membrane-cytoskeleton interactions in axonal function
- Elizabeth Luna:** Membrane skeleton dynamics, motility, adhesion, signal transduction
- Dannel McCollum:** Cell cycle control and cytokinesis in fission yeast
- Peter Pryciak:** Cell polarity, chemotaxis, and signal transduction in yeast
- Greenfield Sluder:** Control of mitosis, centrosome reproduction, cell cycle checkpoints
- Richard Vallee:** Microtubule motors, cytoskeleton, endocytosis
- Yu-li Wang:** Dynamics of the cytoskeleton in living cells
- George Witman:** Motor protein function and assembly; cilia and flagella
- Zuoshang Xu:** Neurodegeneration in ALS mouse models, neuronal cytoskeleton

Detailed descriptions of these research programs are available on the Cell Motility Group page at: <http://www.ummed.edu/dept/oor/motility.html>.

Both beginning and senior postdoctorals are invited to apply. Applicants for postdoctoral positions in one or more of the listed laboratories should send a curriculum vitae, description of research experience, and names and addresses of three references to the investigator(s) of interest: **c/o Andrea Werne, UMMC – Worcester Foundation Campus, 222 Maple Avenue, Shrewsbury, MA 01545 USA.**

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



**TENURE-TRACK  
POSITION IN  
ENDOCRINE MOLECULAR  
GENETICS RESEARCH**

The Developmental Endocrinology Branch, NICHD, is offering a tenure-track position for a clinical investigator to establish an independent research program employing state-of-the-art molecular genetic tools to investigate the etiology and/or treatment of pediatric endocrine diseases. Areas of research that would complement existing programs include, but are not limited to, developmental and neoplastic disorders of the adrenal and pituitary. Candidates should be Board-certified/eligible in Pediatric Endocrinology. Formal training (e.g., Board eligibility) in Human Genetics is highly desirable but not required. The successful candidate will have demonstrated previous success in both laboratory-based and clinical research as evidenced by a strong publication record. *Applicants must be U.S. citizens or permanent residents.* A tenure-track investigator will be supported for up to 6 years before tenure is required. Candidates should send a CV, a statement of research plans, and three letters of recommendation by June 30, 1998, to: **Ms. Sue Perdue, NIH; Bldg. 10, Room 10N262; 10 Center Drive MSC 1982; Bethesda, MD 20892-1862.** *The NIH is an Equal Opportunity Employer.*



## POSITIONS OPEN

### VISITING ASSISTANT PROFESSOR IN BIOLOGY

Two Visiting Assistant Professor positions are available for the 1998-99 academic year. Responsibilities will include teaching sections of general education biology, and possibly principles of biology I and II. Additional teaching opportunities may exist in the areas of developmental biology, genetics, and environmental science. A Ph.D. is required, and some university-level teaching experience is expected. Some research support can be provided.

The department contains 23 regular faculty, and has over 400 majors and a Master's program. Conway is a prosperous city of 40,000 located 30 minutes from Little Rock, yet close to pristine wild areas such as the Buffalo National River and Ozark Mountains.

Submit curriculum vitae, statement of teaching philosophy, evidence of teaching effectiveness, and the names of three references to: **Dr. Paul Hamilton, Department of Biology, University of Central Arkansas, Conway, AR 72035.** Application review will begin May 20th and continue until filled. For further information see website: [http://www2.uca.edu/biology/bio\\_hp/](http://www2.uca.edu/biology/bio_hp/). An Equal Opportunity/Affirmative Action Employer.

**RESEARCH SCIENTIST.** The Clinical Branch of the National Eye Institute, National Institutes of Health, has an immediate position for a Research Scientist. Areas of laboratory investigation will include the role of cell adhesion molecules, costimulatory molecules, and cytokines in ocular inflammatory diseases caused by autoimmunity or allergy. Research will also encompass the immunologic analysis of specimens from patients with ocular inflammation.

Candidates should have a Ph.D. or M.D.-Ph.D. degree and experience in cellular or molecular immunology.

Please send your curriculum vitae and three references to the following address by June 1, 1998: **Scott M. Whitcup, M.D., National Eye Institute, National Institutes of Health, 10/105221, 10 Center Drive—MSC 1863, Bethesda, MD 20892-1863. FAX: 301-496-7295.**

*NIH is an Equal Opportunity Employer.*

University of Pennsylvania Health System, Department of Psychiatry, is recruiting an **ASSISTANT PROFESSOR**, tenure-track, to work within the newly created Center for Neurobiology and Behavior at the University of Pennsylvania. Applicants must have a strong academic background with postdoctoral experience in monkey cortical electrophysiology. Candidates interested in interdisciplinary research with an emphasis on cognitive neuroscience are of particular interest. Newly renovated laboratory space and attractive start-up package and benefits available. Send curriculum vitae and names of three references to: **Dwight L. Evans, M.D., Professor and Chair, and Gary Aston-Jones, Ph.D., Professor, c/o Ava Plotnick, Department of Psychiatry, University of Pennsylvania, 305 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104. Equal Opportunity/Affirmative Action Employer.**

### FOUNDATION GRANTS ADMINISTRATOR

Individual with a graduate degree in science sought to administer the awards program of the Cancer Research Fund of the Damon Runyon-Walter Winchell Foundation. This is a position that requires good management skills and a creative approach to maximizing the position. Office located in midtown Manhattan. Good benefits. Contact by mail:

**Rebecca R. Kry**  
Executive Director  
The Cancer Research Fund  
of the Damon Runyon-Walter Winchell Foundation  
675 Third Avenue, 25th Floor  
New York, NY 10017

### MEDICAL DIRECTOR CARDIOVASCULAR

Ph.D., Pharm.D., or M.D.

Medical education firm seeks a Medical Director responsible for the content of preclinical and clinical cardiovascular projects.

Experience in reviewing, analyzing, and writing manuscripts concerned with cardiovascular clinical and basic research is required. Strong publication track record and familiarity with diseases like arrhythmias, hypertension, heart failure, and restenosis are highly desirable. Mail résumé to: **Applied Clinical Communications, 1160 Parsippany Boulevard, Parsippany, NJ 07054. FAX: 973-316-5997; e-mail: jdagnese@appliedclinical.com.**

## POSITIONS OPEN



### c<sup>2</sup> Biotechnologies

c<sup>2</sup> Biotechnologies is a start-up genetic analysis company with focus on fully integrating nanotechnology and various solid-state techniques with molecular biology. Currently, we are developing new technologies for supplanting DNA chips, Sanger sequencing, and traditional PCR diagnostics. The following position is available.

**SENIOR SCIENTIST.** Requires a Ph.D. and post-doctoral experience with expertise in the following combination of fields: genomics, fluorescence resonance energy transfer, sensitive optical detection, and basic experimental DNA techniques. Industry experience preferred. Successful track record of writing successful grants and strong oral communication skills a must. Enthusiastic and energetic individuals will thrive in the company's entrepreneurial corporate culture. Mail or FAX curriculum vitae, a list of references, and salary history to: **c<sup>2</sup> Biotechnologies, Inc., Attn: Human Resources, 65 Brook Street, Boston, MA 02146. FAX: 617-731-8548.**

### PROGRAM ADMINISTRATOR BASIC IMMUNOBIOLOGY NATIONAL INSTITUTE ON AGING

The Biology of Aging Program (BAP) of the National Institute on Aging (NIA) is seeking an outstanding Immunologist to direct, develop, and manage the Immunobiology of Aging extramural basic research program. Applications are invited from candidates with a strong research background in immunology, cellular or molecular immunology, or microbiology and demonstrated administrative skills. An established track record in obtaining funding and managing a research program is desirable. Responsibilities include providing scientific and professional leadership in the development, direction, coordination, and evaluation of the Immunobiology of Aging grant program at the NIA. The Immunobiology Program Administrator Position is at the GS-601-13/14 levels with an annual salary range of \$55,969 to \$85,978. To receive a FAX copy of the complete vacancy announcement, AG-98-840, ID # 1220, **Telephone: 1-800-728-5627.**

Please send your curriculum vitae or résumé and the Optional Application for Federal Employment Form (OF-612) or the Application for Federal Employment (SF-171) by June 30, 1998, to:

**Christine Hartz**  
NIA Personnel Office  
Building 31, Room 2C02  
31 Center Drive MSC 2292  
Bethesda, MD 20892-2292  
**Telephone: 301-496-5347**

*U.S. citizenship is required. NIH is an Equal Opportunity Employer.*

### SENIOR RESEARCH SCIENTIST DEPARTMENT OF NEUROLOGY University of California, San Francisco

Position immediately available for Ph.D. to direct protein expression and purification group that prepares proteins for structural studies. Requires six to ten years of experience in constructing expression vectors, expressing proteins in bacterial and mammalian cells, purifying the protein products, and characterizing their physical properties. Experience with protein crystallization is desirable but not required. Preferred skills include creative problem solving, clear and concise writing, constructive editing of manuscripts, strong leadership and organization. Salary and title is commensurate with experience and accomplishments. Send curriculum vitae and four letters of recommendation to: **Steven Glaser, Department of Neurology, Box 0518, University of California, San Francisco, CA 94103. FAX: 415-476-8386. Equal Opportunity/Affirmative Action Employer.**

### PARKER COLLEGE RESEARCH INSTITUTE

Parker College of Chiropractic Research Institute is seeking an experienced Clinical Researcher to fill the position of **ASSOCIATE DIRECTOR FOR CLINICAL RESEARCH.** Applicants must have an earned Ph.D., D.C., M.D., and/or D.O., extensive clinical research training, and a history of publication and funding. Competitive salary commensurate with experience. Anticipated starting date September 1998. Please send curriculum vitae and research interests to: **Parker College of Chiropractic, Suite #136, 2500 Walnut Hill Lane, Dallas, TX 75229. Equal Opportunity Employer.**

## POSITIONS OPEN

### RESEARCH SCIENTIST GLOBAL CHANGE AND RIVER BASINS

Global change research group seeks Scientist to participate in a multidisciplinary impact study of human activity on the hydrology and biogeochemical dynamics of river basins. Duties include development and testing of surface hydrology/terrestrial nutrient loading models, statistical analysis, database management, technical documentation and scientific writing, project management, and workshop organization. Experience with GIS, UNIX-based workstations, and computer modeling preferred. Applicants must have a Ph.D. or a Master's with three years of professional experience. Strong quantitative background in environmental sciences/engineering, hydrology, geochemistry, ecology, or mathematics essential. This is a grant-funded position. Starting salary: \$35,710 to \$40,500. Résumés received by June 1, 1998, are assured full consideration. Please forward résumé to: **Dr. Charles Vorosmarty, Institute for the Study of Earth, Oceans, and Space, University of New Hampshire, Morse Hall, Durham, NH 03824. Telephone: 603-862-1792; FAX: 603-862-0188; e-mail: charles.vorosmarty@unh.edu.**

*UNH is an Affirmative Action/Equal Employment Opportunity Employer.*

Biomolecular materials **RESEARCH CHEMIST ZP-1320-III (\$39,270 to \$61,432).** The Biotechnology Division, National Institute of Standards and Technology (NIST), Department of Commerce, is seeking a Research Chemist for a two-year term appointment. Applicants must have specialized experience in physical biochemistry to apply to measurements of model cell membranes for structure/function studies. Experience should include work with lipids and proteins, vibrational spectroscopy, and methods of surface analysis. Knowledge of diagnostics, tissue engineering, and/or pharmaceutical development is a plus. For technical details, contact: **Dr. Anne Plant, Telephone: 301-975-3124; e-mail: anne.plant@nist.gov. Telephone: 301-926-4851 or visit website: http://www.nist.gov/public\_affairs/general2.htm** for position requirements and copy of the vacancy announcement NIST/98-1516/CAH before submitting an application. Applications must be postmarked by June 12, 1998. Send to: **NIST, Administration Building, Room A-123, Office of Human Resources Management, ATTN: NIST/98-1516/CAH, Gaithersburg, MD 20899. DoC/NIST is an Equal Employment/Affirmative Action Employer. U.S. citizenship required.**

**ASSOCIATE PROFESSOR.** The Department of Medicine at the Yale School of Medicine seeks an individual with at least four years of experience in molecular genetics to establish a research program on the genetics of renal and/or cardiovascular disease. The successful applicant should also have appropriate clinical training and Board certification to serve as a teaching attending in an internal medicine subspecialty (e.g., nephrology, cardiology). Tentative starting date September 1, 1998. Applicants should send curriculum vitae before May 15, 1998, to: **Linda Chiaraluce, Associate Administrator, Department of Internal Medicine, Yale School of Medicine, P.O. Box 208029, New Haven, CT 06520-8029. An Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are particularly encouraged to apply.**

### THEORETICAL SYSTEMS NEUROBIOLOGY

Tenure-track, 12-month **ASSISTANT PROFESSOR** position in theoretical neurobiology at the Institute of Neurobiology in Old San Juan Puerto Rico. Preference will be given to candidates who can apply novel theoretical approaches to the study of simple nervous systems and who can combine modeling and experimental techniques. Applicants should send a curriculum vitae, a statement of current and future research interests, and the names of three references to: **Director, Institute of Neurobiology, 201 Boulevard del Valle, Old San Juan, Puerto Rico, 00901.**

### RESEARCH ASSISTANT

Research Assistant position available immediately to study the role of vascular mediators in intrauterine growth restriction and preeclampsia using animal model systems. Candidates must have a B.S./M.S. An interest in animal surgery and experience in molecular biology required. Please send curriculum vitae and the names of three references to: **Larry G. Thact, Ph.D., Division of Maternal-Fetal Medicine, Evanston Hospital, Evanston, IL 60201.**



# THE INSIDE TRACK

The best way to get your foot in the door is to get there first. SCIENCE's new e-mail Job Alerts service allows you to receive advanced notification about new jobs appearing on SCIENCE Professional Network. If you're actively looking for a new position, or just testing the market, here's why you need to make Job Alerts part of your search...

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# SCIENCE JOB ALERTS

Go to [www.sciencemag.org](http://www.sciencemag.org)  
click on SCIENCE Professional Network  
then click on Job Alerts

## Manager, Confocal Imaging Facility Experimental Immunology Branch of the National Cancer Institute

The Experimental Immunology Branch (EIB) of the National Cancer Institute (NCI) invites applications for a Staff Scientist position to function as Manager of a Confocal Imaging Facility. Typical applicants will have an advanced degree in immunology, cell biology, or allied fields. The applicant must have extensive experience using laser scanning confocal microscopy, digital imaging, and video microscopy in cell biological applications. The applicant should have a wide range of computer skills that facilitate image capture and analysis, and preferably have some programming skills. The applicant would manage and run a core facility to support the imaging need for the EIB, which is a highly interactive group of about 50 scientists conducting research in molecular and cellular immunology. The applicant will be expected to apply new imaging technologies as they emerge. Salary range is between \$54–70,000 depending on qualifications and experience. Applicants should send curriculum vitae, bibliography, statement of career directions, and three letters of reference to:

Ms. Karen Augustine  
National Institute of Health  
10 Center Drive  
Bldg. 10 Room 4B17 MSC 1360  
Bethesda, MD 20892-1360

Applications should be postmarked by July 15, 1998.

*NIH is an Equal Opportunity Employer.*

## GLOBAL OPPORTUNITIES



### RIKEN BRAIN SCIENCE INSTITUTE, Japan LABORATORY HEADS IN ADVANCED TECHNOLOGY DEVELOPMENT CENTER

RIKEN, the Institute for Physical and Chemical Research (<http://www.riken.go.jp>) in Tokyo launched the Brain Science Institute (BSI) (*Science* 275:1562, 276:1011; *Nature* 382:105) in October 1997. The Institute has established an Advanced Technology Development Center (ATDC) in addition to three research areas: understanding, protecting, and creating the brain. The novel characteristics of this unique ATDC are described below.

Science and technology are the two legs that support modern civilization. Many scientific discoveries owe much to technical innovations, while technical advances are often stimulated by scientific breakthroughs. The ATDC consists of research laboratories involved in the development of physico-chemical measurement technologies and cell biological methods and materials for brain science. The primary research thrust is the creation of innovative technologies for brain science. The laboratories play an important role in the technological advancement program of the Institute. Two already established ATDC laboratories are entitled: Neural Architecture and Behavioral Genetics. These laboratories are focusing on new immunocytochemical methods and gene manipulation technologies with the aim of bringing innovations which will improve the information derived from these methods.

The ATDC is planned to establish two other laboratories late in 1998. The focus of the laboratories will be determined by the laboratory head, but should be in one of the following general areas: New non-invasive measurement techniques including optical recording (instrumentation, markers, etc.) or image analysis, and new biological methods and materials including cell and tissue culture or transplantation. The laboratory head will be generously supported and will be responsible for recruiting 5–10 members of his/her. The laboratory head will be reviewed every 5 years by an international panel of experts and can continue the laboratory when a good evaluation is given. Applications are encouraged from around the world, but the person will be required to work at RBSI full time.

Applicants should submit a proposed project (not more than 1,000 words), along with a full curriculum vitae listing all publications and the name, address, and telephone number of three references to: Search Committee #3, Brain Science Institute, RIKEN, 2-1 Hirosawa, Wako, Saitama, 351-0198 Japan, FAX: +81-48-467-9692, E-mail: [search3@brain.riken.go.jp](mailto:search3@brain.riken.go.jp).  
Deadline for application: July 31, 1998



## POSITIONS OPEN

### MANAGER OF TECHNOLOGY ACQUISITION AND LICENSING

Seminis, the world's largest vegetable seed company, seeks applicants for the position of Worldwide Manager of Technology Acquisition and Licensing at its Woodland, California, Research and Development Headquarters. The incumbent will be responsible for identifying and evaluating new technologies, particularly biotechnology, and on a worldwide basis. The position will also be responsible for all licensing and research agreements for Seminis Department. The position requires a Ph.D. in plant molecular biology or related field, significant experience in contracts and licensing, and strong organizational, interpersonal, and management skills. Compensation will be commensurate with experience. Please send letter, résumé, and references to: **Seminis Vegetable Seeds, Attn: Human Resources, 37437 State Highway 16, Woodland, CA 95695. FAX: 530-666-3198; e-mail: donald.greenbaum@svseeds.com.** Applications must be marked: "EG-498." *Seminis Vegetable Seeds is an Equal Opportunity Employer.*

The Division of Gastroenterology and Hepatology at Mayo Clinic in Rochester, Minnesota, is recruiting an individual to fill a **RESEARCH POSITION**. The candidate must hold an M.D. or Ph.D. degree, have national/international visibility as an Investigator, and have a track record of sustained federal funding in the United States or its equivalent abroad. His/her research interest should be relevant to gastroenterology and/or hepatology. The Mayo Clinic provides an outstanding research environment with substantial intramural support. Academic rank will be commensurate with the individual's experience. Interested applicants should submit a statement of research interests, curriculum vitae, bibliography, and a list of references to: **Dr. Nicholas F. LaRusso, Chair, Division of Gastroenterology and Hepatology, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905. E-mail: thornton.lisa@mayo.edu.** Deadline for application is July 1, 1998. *Mayo Foundation is an Affirmative Action/Equal Opportunity Educator and Employer.*

### APPLICATION SCIENTIST

Biacore, Inc. (website: <http://www.biacore.com>), the world leader in novel biosensor technology for the analysis of biomolecular interactions, has an opening for an Associate Application Scientist at our U.S. headquarters in Piscataway, New Jersey. Responsibilities include customer training and telephone support, product demonstrations, and the development of new applications for biomolecular characterization. B.S. or M.S. with two to five years of postgraduate laboratory experience in biochemistry, biophysics, protein characterization, and/or assay development. Strong written and verbal communication skills required. Instrumentation background and knowledge of kinetics would be a plus. Send résumé with references and salary history/requirements to: **Human Resources, Biacore, Inc., 200 Centennial Avenue, Suite 200, Piscataway, NJ 08854.** *We are an Equal Opportunity Employer. Minorities/Females/Disabled/Veterans.*

### PART-TIME MICROSCOPE SALES/SCIENTISTS

Manufacturer of a new, high-resolution optical 3-D microscope seeks Microscopists with discretionary time interested in supplementing income through equipment sales and application development. Ideal candidate will continue to perform research in a discipline benefiting from 3-D analysis. Compensation based on ability to develop and publish new applications for technology and to assist in sales of microscopes to other scientists.

Send résumé to:

**InGen Corporation  
235 Montgomery Street  
Suite 300  
San Francisco, CA 94104**

### ASSOCIATE RESEARCH SCIENTIST

Position open for individual with Ph.D. degree and several years of research experience in cell and molecular biology with a focus on secretion of proteins from cultured hepatocytes. Particular expertise in hepatic assembly of lipoproteins is desired. Individual must have a proven track record of conducting and publishing independent research. Please send curriculum vitae to: **Department of Medicine, Columbia University, 630 West 168th Street, Room P&S 9-510, New York, NY 10032.** *We take Affirmative Action toward Equal Employment Opportunity.*

## POSITIONS OPEN

Keck Graduate Institute of Applied Life Sciences, founded in 1997 as a member of the Claremont Colleges consortium in California, is recruiting an innovative and interdisciplinary **FOUNDING FACULTY**. Fields of particular interest include bioinstrumentation, biochemical process engineering, and bioinformatics. Further information at website: [www.kgi.edu](http://www.kgi.edu). Contact: **Bonnie Busenberg, 1263 North Dartmouth, Claremont, CA 91711. Telephone: 909-607-7853; e-mail: bonnie\_busenberg@kgi.edu.**

### ENVIRONMENTAL SPECTROSCOPY POSITION

The William R. Wiley Environmental Molecular Sciences Laboratory (EMSL) at Pacific Northwest National Laboratory (PNNL) is seeking an Environmental Spectroscopist(s) to work within its Environmental Dynamics and Simulation directorate. The EMSL is a national user facility with overall focus on environmental molecular science. The position involves the performance of original grant-supported research and the mentoring and support of collaborators using the EMSL facility. Candidates are sought to apply spectroscopic techniques including vibrational spectroscopy/microscopy, scanning probe microscopy, electron paramagnetic resonance, and/or optical spectroscopy methods to the study of chemical reaction at the mineral water or microbe-water interface.

Many other techniques, including access to a synchrotron beamline with X-ray microprobe capability and state-of-the-art UHV microscopy and spectroscopy, are available for application in research, but the laboratory specifically seeks candidates with strength and experience in the techniques mentioned above to complement existing staff. The laboratory will consider hiring at one of two levels. The lower level requires a Ph.D. in geochemistry, environmental chemistry, or related fields and documented capability to perform and publish high-caliber research. The upper level is more senior and requires a strong record of publications and grantsmanship in the environmental/geochemical sciences, and documented program development skills in addition to the other criteria.

Battelle Memorial Institute operates Pacific Northwest National Laboratory for the U.S. Department of Energy. Résumés and inquiries should be directed to: **Battelle Pacific Northwest National Laboratory, Attn: Department 10-2082-091-MJH, P.O. Box 999, Richland, WA 99352. E-mail: mary.heaton@pnl.gov.** *Battelle PNNL is an Equal Opportunity/Affirmative Action Employer and supports diversity in the workplace. Women, minorities, disabled and Vietnam-era veterans, and disabled persons are strongly encouraged to apply.*

Administrative position. **HEAD, DEPARTMENT OF BIOMEDICAL SCIENCES** at the Oregon State University College of Veterinary Medicine. The department faculty have academic, research, and service responsibilities in anatomy, physiology, microbiology, pathology, and toxicology. Ph.D. required; preference given for the D.V.M. Demonstrated abilities in extramurally funded research, budget management, and leadership required. For information: **Telephone: 541-737-2098; e-mail: rarickd@ccmail.orst.edu.** Application deadline is June 15, 1998. *Oregon State University is an Affirmative Action/Equal Opportunity Employer.*

### NMR SPECTROSCOPIST UNIVERSITY OF DELAWARE

The University of Delaware seeks an NMR Spectroscopist to manage its facility. For full details on the position and deadlines, check our website: <http://www.udel.edu/dybowski/bhnmr.htm>. Or contact: **Telephone: 302-831-6770.**

*The University of Delaware is an Equal Opportunity Employer that encourages applications from minority group members and women.*

### MATERIAL SCIENTIST

Trained in ceramics, polymers, and metals and their application as biomaterials in medical devices, especially blood-contacting medical devices.

Please send your résumé to:

**Kriton Medical, Inc.  
P.O. Box 4225  
Citrus Heights, CA 95610  
E-mail: kriton@kritonmedical.com**

## POSITIONS OPEN

### RESEARCH ASSOCIATES IN SPACE BIOLOGY SPECIAL PROGRAM FOR MINORITY APPLICANTS

The advances in the Space Shuttle Program and development of the Space Station have allowed the development of space biology science that offers exceptional opportunities for research. NASA is offering Research Associate Awards in a special program for minorities at the postdoctoral level for scientists to conduct space biology research in a university laboratory or nongovernmental research institute of your choice that can provide the necessary facilities and research environment. Projects should be in the gravitational and space biology discipline. The awards are \$20,000 for the first year and have the possibility of renewal at \$22,000 for a second year. Funding will begin July 1 to October 1, 1998. This is a special program for minority applicants, and U.S. citizens and permanent resident aliens with Ph.D., M.D., D.V.M., D.M.D., or equivalent degrees are eligible to apply. Proposals are due June 30, 1998. For information and application booklet contact: **Dr. Gerald Sonnenfeld, Department of General Surgery Research, Carolinas Medical Center, P.O. Box 32861, Charlotte, NC 28232. Telephone: 704-355-2639; FAX: 704-355-7203.**

**SENIOR RESEARCH INVESTIGATOR.** The Center for Neurodegenerative Disease Research in the Department of Pathology and Laboratory Medicine at the University of Pennsylvania invites applications for a Senior Research Investigator. The candidate should hold a Ph.D. degree in neurobiology and should have five years of postdoctoral experience in neurodegenerative research. Duties include maintenance of a brain bank, supervision of Fellows, students, and technicians in neurohistology studies. The applicant is expected to be familiar with quantitative microscopy, electronic imaging techniques, confocal microscopy, and to conduct research in Alzheimer's and Parkinson's diseases.

Curriculum vitae, bibliography, and three references should be submitted to: **John Q. Trojanowski, M.D., Ph.D., Co-Director of the Center for Neurodegenerative Disease Research, University of Pennsylvania, 3rd Floor Maloney Building, 3400 Spruce Street, Philadelphia, PA 19104-4283. FAX: 215-349-5909; e-mail: florence@mail.med.upenn.edu.** *The University of Pennsylvania is an Equal Opportunity Employer. Women and minorities are encouraged to apply.*

### POSTDOCTORAL POSITIONS AVAILABLE IMMEDIATELY

The Hurley Research Group at The University of Texas at Austin has two Postdoctoral positions available in studies related to the effect of drugs on transcriptional control and design and synthesis of telomerase inhibitors. Experience in *in vitro* transcription experiments, protein-DNA binding studies, or synthetic organic chemistry is required.

Send curriculum vitae and names of three references to:

**Laurence H. Hurley, Ph.D.  
College of Pharmacy, PHR 3.206  
The University of Texas at Austin  
Austin, TX 78712**

*An Equal Opportunity Employer.*

Princeton University. Applications are solicited for **POSTDOCTORAL POSITIONS** in the Department of Ecology and Evolutionary Biology. Areas include ecological and evolutionary genetics; speciation; molecular evolution; RNA evolution; evolutionary ecology; behavioral ecology; theoretical ecology; population and community ecology; physiology, neuroscience, and behavior; epidemiology of infectious diseases; global interactions among the biosphere, atmosphere, oceans, and climate; and conservation biology. Ph.D. required. Please send curriculum vitae, letter describing research interests, and names of three references to: **Department Manager, Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ 08544.** *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

### SCIENTISTS AND RESEARCH ASSOCIATES IN MOLECULAR BIOLOGY

OriGene Technologies Inc. is a rapidly growing biotechnology company located in close proximity to NIH. We are seeking outstanding **MOLECULAR BIOLOGISTS** who have strong interests in developing innovative solutions for gene cloning and functional genomics. Please send curriculum vitae to: **James A. Riley, OriGene Technologies Inc., 13 Taft Court, Suite 111, Rockville, MD 20850.**

## Research Fellowship

Departments of Engineering  
Science & Physiology

### Vacancy 957SNC

A Research Fellowship is available immediately (until early 2000) at The University of Auckland.

This position has been created as part of a research programme to investigate the thermal and mechanical characteristics of small samples of living heart muscle. The programme involves the construction of a constant flow microcalorimeter to measure heat production from superfused samples of tissue having mass in the order of tens of micrograms.

Applicants should have a PhD and experience in developing instruments for precision low level measurements. Some familiarity with the finite element method, signal processing, or experimental physiology is desirable.

Salary will be NZ\$45,250 per annum.

Resumes with details of academic record and research experience, along with the addresses of two referees should be sent to the Human Resources Adviser, Faculty of Medicine and Health Science, The University of Auckland, Private Bag 92019, Auckland, New Zealand, **by 15 May 1998**.

Further information is available from Dr Poul Nielsen, telephone 64-9-373 7599 ext 8391, fax 64-9-373 7468, email: p.nielsen@auckland.ac.nz. For general information about The University of Auckland visit our website at: [www.auckland.ac.nz](http://www.auckland.ac.nz)

**Please quote Vacancy 957SNC in all correspondence.**

ASSISTANT REGISTRAR,  
ACADEMIC APPOINTMENTS



*The University has an  
equal opportunities  
policy and welcomes  
applications from all  
qualified persons*



Pharmaceuticals

## Post-doctoral positions

### Who we are

One of the primary missions of the preclinical CNS research department at F. Hoffmann-La Roche Ltd in Basel (Switzerland) is to investigate novel approaches to the therapy of affective and neurological disorders and to discover and develop drugs offering major therapeutic advances.

### The positions

To plan, develop, validate, and conduct novel test paradigms for the therapy of CNS disorders with the goal of identifying novel antidepressants, antipsychotics, anxiolytics, and cognition enhancers. To collaborate on interdisciplinary teams with specialists in other scientific areas. To stay abreast with the latest research advances. Publication of research findings is strongly encouraged. Several positions are available which require different levels of post-graduate experience.

### Who you are

You have a Ph.D. in biological or medical sciences with a solid background in state-of-the-art techniques in behavioral pharmacology (such as intracerebral stimulation and recording, microneurosurgery, operant conditioning, etc.). A basic knowledge of biochemistry and molecular biology would be advantageous. Experience in setting up test systems, including associated computer programming, would be useful. Proven research skills in a relevant research area and basic computer skills are prerequisites. You are fluent in English (a good command of German or French is desirable).

### Who to contact

If the above profile fits your background and experience and you are interested in such a challenging post-doctoral position then please forward full application documentation to our Human Resources Department, attn. of Mr. W. Aschwanden, F. Hoffmann-La Roche Ltd, P.O. Box, CH-4070 Basel, quoting reference As613.



## POSITIONS OPEN

### SENIOR MEMBER AND DIRECTOR OF THE LABORATORY FOR ATHEROSCLEROSIS RESEARCH Tampa Bay Research Institute

Tampa Bay Research Institute (TBRI) is an independent, nonprofit research organization located on a small lake in the beautiful Tampa Bay area. The Institute is based in a modern facility with excellent laboratories suitable for research on molecular biology, virology, and immunology research of human chronic debilitating diseases.

TBRI announces a national search for an experienced Investigator to assume responsibility as the Director of the newly endowed Laboratory for Research on Atherosclerosis. Applicants should have a Ph.D. or M.D. or equivalent training, engaged in peer-reviewed, funded program, a minimum of seven years of postdoctoral research experience, and evidence of sustained productive, independent research.

Qualified individuals are encouraged to apply for the position of Senior Member and Laboratory Director. Applications should include a curriculum vitae and a statement of research interests to:

Chair, Search Committee  
Tampa Bay Research Institute  
10900 Roosevelt Boulevard  
St. Petersburg, FL 33716

### NEURODEGENERATIVE DISEASE POSTDOCTORAL FELLOWSHIPS

Applicants are sought for Postdoctoral openings in a close-knit neurodegenerative disease research group to work under the mentorship of Dr. J. Eberwine, Dr. V. M.-Y. Lee, Dr. J. Q. Trojanowski, and/or Dr. B. Wolf on the cell and molecular biology of mechanisms of Alzheimer's, Parkinson's, and related diseases using models and patient-derived samples. The program emphasizes state-of-the-art model systems (e.g., human neuron cultures, transgenic mice) and methods (e.g., "single cell" mRNA expression profiling, viral expression vectors, confocal microscopy).

Candidates should be M.D.'s or Ph.D.'s in neurobiology with a strong commitment to neurodegenerative disease research. Curriculum vitae, bibliography, and three references should be submitted to: Ms. Karen Engel, c/o Director of the Center for Neurodegenerative Disease Research, University of Pennsylvania, 3rd Floor Maloney Building, 3400 Spruce Street, Philadelphia, PA 19104-4283. FAX: 215-349-5909; e-mail: englk@mail.med.upenn.edu. The University of Pennsylvania is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

### POSTDOCTORAL POSITION

A Postdoctoral position at the Harvard Medical School is open immediately to conduct research in the areas of oncogenesis and signal transduction. The appropriate candidate would be involved in the functional characterization of novel tyrosine kinases and novel tyrosine phosphatases in hematopoietic and endothelial cells. A working knowledge of molecular and cell biology is essential for this project. Please send curriculum vitae and three references to:

Jerome E. Groopman, M.D.  
Chief, Division of Experimental Medicine  
Beth Israel Deaconess Medical Center  
Harvard Institutes of Medicine  
4 Blackfan Circle  
Boston, MA 02115  
FAX: 617-975-5244

### CELL BIOLOGIST/BIOCHEMIST

POSTDOCTORAL FELLOW position is available in the Medicine Department, Brigham and Women's Hospital/Harvard Medical School to study the role of cysteine proteases in MHC class II antigen presentation and immunity. Experience in immunology, cell culture, and mouse models preferred. Send curriculum vitae to:

Dr. Harold Chapman  
Pulmonary and Critical Care  
Brigham and Women's Hospital  
75 Francis Street  
Boston, MA 02115  
FAX: 617-732-7421

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## POSITIONS OPEN



**The Henry M. Jackson Foundation**  
for the Advancement of Military Medicine

### POSTDOCTORAL POSITION

Seeking two Postdoctoral Fellows experienced in the field of DNA repair on extremely DNA damage-resistant bacterium *Deinococcus radiodurans*. Positions are located in the Department of Pathology, Uniformed Services University of the Health Sciences, Bethesda, Maryland. One position will address recombination systems studies *in vivo* and *in vitro*. The other position will investigate the role of chromosome structure in DNA damage-resistance, and will call for techniques of molecular biology, electron microscopy, and light microscopy including confocal and CellScan deconvolution microscopy with FISH. For more information, e-mail: kminton@usuhs.mil. We offer a comprehensive benefits package. Send curriculum vitae to:

Human Resources Department  
Attn: PL#2980150, -151  
Henry M. Jackson Foundation  
for the Advancement of Military Medicine  
1401 Rockville Pike, Suite 600  
Rockville, MD 20652  
E-mail: hr@mail.hjf.org

Equal Opportunity Employer/Affirmative Action.

### COMPUTATIONAL/SIMULATION POSTDOCTORAL/VISITING SCIENTISTS

Position One: Computational metallo-organic biochemistry. Will focus on describing transition metal containing enzymatic reactions using high-level *ab initio* and/or DFT computational methods. Subsequent forcefield development for molecular dynamics simulations to better understand fundamental dynamics motions. Opportunity to work with experimentalists toward rational enzyme redesign.

Position Two: Protein-ligand molecular dynamic simulations and drug design. Will focus on molecular dynamics simulations of proteins with ligands and different solvents. Will work closely with experimental collaborators on rational drug design projects.

These are one-year positions, but renewable for several years with mutual consent. Candidates must have a strong publication record and be highly motivated. Exceptional candidate could have opportunity for long-term position. Must be able to work with others and by self. Stipend \$36,000 or higher depending on qualifications, plus medical, plus some relocation expenses. Positions are available starting summer or fall 1998, but will consider waiting for exceptional candidate. Send résumé, three reprints, and e-mail addresses of three professional references to: Dr. Rick L. Ornstein, Pacific Northwest National Laboratory, Battelle-Northwest, Mailstop k1-83, Richland, WA 99352. FAX: 509-375-6904; e-mail: rl\_ornstein@pnl.gov.

Two POSTDOCTORAL POSITIONS beginning immediately, in a major research laboratory concerned with all aspects of the biochemistry, molecular biology, and endocrinology of vitamin D and its biologically active hormone 1,25(OH)<sub>2</sub>-vitamin D<sub>3</sub>. Both Postdoctoral positions to work on the mechanisms of how the steroid hormone 1α,25(OH)<sub>2</sub>-vitamin D<sub>3</sub> interacts with its receptors to affect regulation of gene transcription, cell differentiation events, and rapid responses. The focus will be on molecular biological approaches and site-directed mutagenesis. Salary approximately \$27,000. Send curriculum vitae and names and telephone numbers of three references to: Dr. Anthony W. Norman, Biochemistry Department, University of California, Riverside, CA 92521. FAX: 909-787-4784; e-mail: norman@ucr1.ucr.edu. University of California is an Equal Opportunity Employer.

**COMPUTATIONAL BIOLOGY.** The Fox Chase Cancer Center is seeking a PROFESSIONAL to develop and maintain state-of-the-art bioinformatics software, as a participant in research including genetics, protein structure, cell biology, and more. You should have strong programming experience, ideally including standard bioinformatics tools, UNIX, C, Perl, Java, relational databases, data warehousing and mining. Strong computer science, biology, and/or mathematics desired. Please forward a letter of application including salary requirements and résumé to: Human Resources, c/o Marianne Green, Attn: Bioinformatics, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. FAX: 215-728-2682. Equal Opportunity Employer.

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH POSITION BETH ISRAEL DEACONESS MEDICAL CENTER Harvard Medical School

Two positions will be available July 1, 1998. To use gene targeting, transgenic, and other molecular biology approaches to investigate mechanisms important in the pathogenesis of obesity. Molecules being studied include uncoupling proteins 1, 2, and 3, adrenergic receptors, brain neuropeptides, and neuropeptide receptors.

Applicants must have Ph.D. and/or M.D. degrees and productive research experience as evidenced by publications in the areas of molecular biology or mitochondrial biochemistry. Send, e-mail, or FAX curriculum vitae, a description of research interests, and three letters of reference to:

Bradford Lowell, M.D., Ph.D.  
Beth Israel Deaconess Medical Center  
RN-320, Division of Endocrinology  
330 Brookline Avenue  
Boston, MA 02215  
E-mail: blowell@bidmc.harvard.edu  
FAX: 617-667-2927

BIDMC is an Affirmative Action/Equal Opportunity Employer.

### POSTDOCTORAL POSITION MOLECULAR NEUROSCIENCE ALZHEIMER'S DISEASE

The Department of Psychiatry at The Mount Sinai Medical Center has a position available immediately to study mechanisms of inflammation in Alzheimer's and transgenic mouse models of Alzheimer's disease at the level of gene expression. Candidates with molecular biological, neuroanatomical, and cell culture expertise are strongly encouraged to apply for this position.

Qualified candidates should forward curriculum vitae and the names of three references to: Giulio Maria Pasinetti, M.D., Ph.D., Director, Neuroinflammation Research Laboratory, Department of Psychiatry, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. We are an Equal Opportunity Employer fostering diversity in the workplace.

### UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

**POSTDOCTORAL POSITION** available immediately to study the neuroanatomy and neurophysiology of afferent regulation of brain monoaminergic neurons. The successful applicant will join the newly created Laboratory of Neuromodulation and Behavior, a group that integrates multiple neuroscience techniques to study noradrenergic and dopaminergic brain systems. Applicants must have a strong academic background and either neuroanatomy or neurophysiology experience. Competitive salary and benefits. Send curriculum vitae and names of three references to: Dr. Gary Aston-Jones, Professor, Department of Psychiatry, University of Pennsylvania, VA Medical Center (151), University and Woodland Avenues, Philadelphia, PA 19104.

### RESEARCH POSITIONS CELL AND MOLECULAR BIOLOGY

One **LABORATORY DIRECTOR** and one **POSTDOCTORAL POSITION** available immediately to study cellular and molecular aspects of hypertension. Applicants must have Ph.D. or M.D. with extensive experience in molecular biology and genetics. In addition, to study pathogenesis of hypertensive kidney disease. Send résumé and three references to: Dr. Harry Ward, Chief, Division of Nephrology and Hypertension, King/Drew Medical Center, 12021 South Wilmington Avenue, Los Angeles, CA 90059. FAX: 213-563-4924; Telephone: 310-668-3177.

**POSTDOCTORAL POSITION** available in early 1998 to study the molecular genetics of human gynecologic cancers. Candidates must have the Ph.D. degree and a strong background in basic techniques of cell and molecular biology and molecular genetics, such as cell culture, molecular cloning, PCR, sequencing, and mutation analysis. Salary commensurate with experience. Send curriculum vitae and names of three references to: Dr. Jeff Boyd, Department of Surgery, Box 201, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. MSKCC is an Equal Opportunity Employer.

**SYNTHELABO**, France's 3rd largest pharmaceutical group, which employs more than 8500 people, has achieved a turnover of 11.7 billion francs in 1997, about 15% of which is invested in its research activities. **THE RESEARCH DIVISION**, with a staff of 1350 specialised researchers, develops highly innovative drugs, mainly in the areas of central nervous system, cardiovascular and internal medicine.

We have currently a major commitment in the domain of genomics-based pharmaceutical research as a result of recent alliances with Human Genome Sciences/SmithKline Beecham and Genset. Due to an expansion of our activities, we have an immediate opening for the following position :

## SENIOR RESEARCH SCIENTIST GENOMICS

You will be involved in the identification of novel genomic targets using molecular biology techniques and bioinformatics.

Qualifications include a Ph.D in molecular biology and 4-5 years of postdoctoral experience. You will have a strong background in methods such as mRNA isolation, cDNA library construction, differential screening, subtractive hybridization, and cDNA cloning. A strong background in bioinformatics would be an advantage.

Motivation, flexibility, as well as excellent communication and collaborative skills are required. Knowledge of French is not essential.

The post will be based at Rueil-Malmaison, on the western outskirts of Paris.

If you are interested, please forward your application (CV and covering letter) quoting the reference GG2 to : **SYNTHELABO RECHERCHE** - Human Resources Department - 10, rue des Carrières - 92500 RUEIL MALMAISON FRANCE



### University of Zürich

The Faculty of Sciences of the University of Zürich invites applications for the position of a

#### Full Professor of Physical Chemistry

Ideally, research activities would focus on experimental physical chemistry with a biophysical emphasis, but related subjects will also be considered. There is a neutron spallation source (SINQ) and a synchrotron radiation source (SLS) at the Paul Scherrer Institute near Zürich, with easy access for external research groups. Besides active research we expect the participation in physical chemistry at all levels teaching and in the directorship of the Institute for Physical Chemistry. Please submit applications with a curriculum vitae, a list of publications, details on teaching experience, and a short program of research intentions before May 31, 1998, to the **Dekan der Philosophischen Fakultät II der Universität Zürich**, Prof. Dr. V. Ziswiler, Winterthurerstr. 190, CH-8057 Zürich.

For further information, please contact **Prof. H. Fischer**, Physikalisch-Chemisches Institut, Winterthurerstrasse 190, CH-8057 Zürich, Tel: +41 1 635 44 21, Fax: +41 1 635 68 13, E-mail: [hfischer@pci.unizh.ch](mailto:hfischer@pci.unizh.ch).

Suggestions for suitable candidates are also welcome.



### Universität Zürich

The Faculty of Sciences (Philosophische Fakultät II) of the University of Zürich invites applications for the position of a

#### Professor of Plant Biology Plant Developmental Biology

at the Institute of Plant Biology. The position is intended to strengthen the Institute's molecular focus in research and should concentrate on the analysis of model systems and the use of modern approaches in plant genomics to study plant development and closely related research areas.

Applicants must have an internationally competitive research program and outstanding scientific achievements in the field of plant developmental biology or closely related areas. The appointment will be made at the level of associate (Extraordinarius) or full professor (Ordinarius), depending on the qualifications of the candidate.

The successful applicant is expected to participate in general teaching in plant biology as well as in more advanced courses. Applicants are invited to submit a curriculum vitae, a publication list, a short summary of current and future research interests, copies of five recent key publications and names, addresses, and phone/fax numbers of three potential references by May 28, 1998, to: **Dekan der Philosophischen Fakultät II der Universität Zürich**, Prof. Dr. V. Ziswiler, Winterthurerstr. 190, CH-8057 Zürich.

For further information please contact **Prof. Dr. B. Keller**, Institute of Plant Biology, Phone +41 1 385 4230, FAX +41 1 385 4204. E-mail: [bkeller@botinst.unizh.ch](mailto:bkeller@botinst.unizh.ch).



## POSITIONS OPEN

Rigel, Inc. is a rapidly growing biotechnology company located in the San Francisco Bay Area focusing on high-throughput genetic screening to map complex cellular functional pathways in the areas of signal transduction linked to the production of immunoglobulins, mast cell exocytosis, and apoptotic mechanisms in tumor cells. Rigel's goal is rapid target validation and the development of small molecule therapeutics for inflammation and cancer. Rigel's proprietary functional genomics database provides valuable leads to novel cellular pathways.

We are looking for several aggressive **POSTDOCTORAL CANDIDATES** to begin in the fall of 1998, who possess a strong publication record in the areas of molecular biology, cell biology, or protein biochemistry. Skills in one or more of the following fields are desired: expression vector design, coimmunoprecipitation, flow cytometry, enzymatic assay development, mammalian cell culture, gene knockouts, and retroviral research. Prior experience with 2D-gels and mass spectrometry useful. Excellent motivation and teamwork skills are essential.

Individuals are expected to work closely with Senior Scientists to analyze novel targets in Rigel's functional pathway database and will be encouraged to publish. Rigel offers competitive salaries, benefits, and equity participation.

Please send letter of inquiry and curriculum vitae to: Human Resources, JOB CODE # PD3-98-SC, Rigel, Inc., 772 Lucerne Drive, Sunnyvale, CA 94086. FAX: 408-736-1588. Website: [www.rigelinc.com](http://www.rigelinc.com). Equal Opportunity Employer.

### POSTDOCTORAL POSITION AT EMORY BLOOD PRESSURE CONTROL

NIH-funded Postdoctoral position available to study the role of angiotensin-converting enzyme (ACE) in blood pressure control and renal development. Mice with an ACE knockout present with extremely low blood pressure, a developmental defect of the renal medulla, and the inability to concentrate urine (*Lab. Invest.* 74:953-965, 1996; *JCI* 99:2375-2385, 1997). The project will be to create and study mice, made using homologous recombination, that express ACE only in selected tissues. This is a wonderful project for someone interested in physiology or vascular biology. Requirements: M.D. or Ph.D. Requires American citizenship or permanent U.S. residency. Reply to: Ken Bernstein, Department of Pathology, Emory University, Atlanta, GA 30322. E-mail: [kbernst@emory.edu](mailto:kbernst@emory.edu).

Emory University is an Equal Opportunity/Affirmative Action Employer.

The caveolae membrane system organizes signal transduction at the cell surface and internalizes small molecules or ions such as cholesterol, folate, and calcium. **POSTDOCTORAL POSITIONS** are now available for individuals interested in becoming trained in this growing area of cell biology research. Opportunities are available to study either caveolae membrane traffic with Dr. G. S. Bloom or signal transduction from caveolae with Dr. R. G. W. Anderson. Qualified individuals should apply to: The Caveolae Research Project, Department of Cell Biology and Neuroscience, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9039. An Equal Opportunity Employer.

### RESEARCH INVESTIGATOR

Ph.D. degree; advanced academic knowledge of molecular biology, cell immunology, and autoimmune disease. 10-plus years of experience.

### POSTDOCTORAL FELLOW

Ph.D. degree; advanced knowledge of microbiology, bacteriology, and virology. Strong experience with immunoassays, bacterial and viral culture.

Contact: Allergy/Internal Medicine, University of Michigan Medical Center, 9220 MSRB III, 1150 West Medical Center Drive, Ann Arbor, MI 48109-0648. FAX: 734-936-2990; e-mail: [cverweij@umich.edu](mailto:cverweij@umich.edu).

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**POSTDOCTORAL POSITION** available for *in vivo* studies of memory B cell development and the mechanism of somatic mutagenesis. Candidates should have a solid background in molecular immunology and flow cytometry. Studies will involve high-resolution cell sorting by FACS and optical trapping technology, single-cell/molecular PCR and transgene-targeting. Send curriculum vitae to: Dr. Lawrence J. Wysocki, Division of Basic Sciences K902, National Jewish Medical and Research Center, 1400 Jackson Street, Denver, CO 80206. FAX: 303-270-2182; e-mail: [wysockil@njc.org](mailto:wysockil@njc.org). Equal Opportunity/Affirmative Action Institution.

## POSITIONS OPEN

### POSTDOCTORAL FELLOWSHIP HYBRIDOMA CENTER FOR AGRICULTURAL AND BIOLOGICAL SCIENCES

A position is available for a Postdoctoral Scientist in the Hybridoma Center for Agricultural and Biological Sciences of Oklahoma State University. This core facility provides services in generation of monoclonal and polyclonal antibodies; antibody purification; scale-up of antibody production; serological assay performance and development/consultation with researchers; and instruction regarding antibody-based technologies. Qualifications for this position include a Ph.D., or equivalent degree, in immunology, microbiology, biochemistry, cell biology, molecular biology, or related discipline; experience in monoclonal and polyclonal antibody production and screening; isolation and purification of immunoglobulins; and performance of serological assays. Experience with bioreactors and antibody-like phage display libraries would be helpful.

To apply submit a letter of application containing a description of experience related to this position along with names, addresses, and telephone numbers of three references to: Dr. Stephen Wikel, Professor and Endowed Chair, Department of Entomology and Plant Pathology, 127 Noble Research Center, Oklahoma State University, Stillwater, OK 74078-3033.

To be assured full consideration, applications must be received by June 1, 1998. The search will continue until a suitable applicant is identified.

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### THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER

The University of Texas M. D. Anderson Cancer Center has an outstanding opportunity at our research facility located in Smithville, Texas for:

#### POSTDOCTORAL TRAINEES

Postdoctoral training positions through an NCI-sponsored training program in molecular and cellular mechanisms of carcinogenesis are available starting July 1, 1998. Research programs focus on the following areas: DNA repair and mutagenesis, role of oncogenes and/or tumor suppressor genes in multistage carcinogenesis, tumor promotion, normal and tumor cell differentiation, carcinogen metabolism and adduct formation, retrovirology, chemoprevention, and nutrition in cancer. Applicants must be U.S. citizens or permanent residents and must have a Ph.D., M.D., or D.V.M. degree.

For an application, contact: Dr. Ellen Richie, Professor, University of Texas Science Park, Box 389, Smithville, TX 78957. E-mail: [erichie@odin.mdacc.tmc.edu](mailto:erichie@odin.mdacc.tmc.edu); Telephone: 512-237-9425. We are an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

#### NMR POSTDOCTORAL POSITION

A Postdoctoral position is open for two years for studies of the NMR structure of proteins that interact with DNA. Studies will be directed toward solution structure determination, DNA interactions, or protein-protein interactions. The primary goal of the NMR structural research is to characterize the detailed function and/or mechanism of the protein/enzyme under study, which include DNA recombinases, DNA polymerase beta, and DNA repair proteins. Studies are performed in biochemical and NMR laboratories complete with Varian INOVA 600 and 500 NMR spectrometers. To apply send a curriculum vitae with names of three references to: Dr. Gregory P. Mullen, Associate Professor, Department of Biochemistry, MC-3305, University of Connecticut Health Center, Farmington, CT 06032. E-mail: [gmullen@panda.uconn.edu](mailto:gmullen@panda.uconn.edu); website: <http://www.uconn.edu/~mbb/mbbfac/mullen.html>.

A **POSTDOCTORAL POSITION** is available to study cell and molecular biology of human melanocytes and melanoma. Specific areas of research include intracellular sorting and targeting, melanosome biogenesis and melanoma antigen processing pathways, melanocyte differentiation, and melanoma metastasis. Applicants with Ph.D. and research experience in immunology, cell biology, or molecular biology will be preferred. Send curriculum vitae and names and addresses of three references to: Vijayaradhil Setaluri, Ph.D., Departments of Dermatology and Cancer Biology, Wake Forest University School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157-1016. E-mail: [setaluri@bgsm.edu](mailto:setaluri@bgsm.edu); FAX: 336-716-7732.

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS MOLECULAR BIOLOGY OF BACTERIAL AND VIRAL PATHOGENESIS

Postdoctoral positions are available in the Department of Microbiology at the University of Colorado Health Sciences Center to work on characterization of the diphtheria toxin repressor and its regulon in *Corynebacterium diphtheriae* (with R. K. Holmes); structure and function of cholera toxin (with R. K. Holmes); role of iron- and oxygen-regulated genes in *Pseudomonas aeruginosa* virulence (with M. L. Vasil); molecular and cellular biology of a novel class of phospholipases of *Mycobacterium tuberculosis* and *P. aeruginosa* (with M. L. Vasil); and molecular mechanisms of picornavirus and hepatitis C virus RNA replication (with D. J. Barton). A Ph.D. or comparable professional degree with experience in microbiology, molecular biology, genetics, biochemistry, cell biology, or infectious diseases is required. Research facilities and professional environment are excellent. Salaries are commensurate with training and experience. Submit curriculum vitae, bibliography, and names of three professional references by mail to: Dr. Randall K. Holmes, Dr. Michael L. Vasil, or Dr. David J. Barton, Department of Microbiology, Campus Box B-175, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. E-mail: [randall.holmes@uchsc.edu](mailto:randall.holmes@uchsc.edu), [mike.vasil@uchsc.edu](mailto:mike.vasil@uchsc.edu), or [david.barton@uchsc.edu](mailto:david.barton@uchsc.edu). The University of Colorado Health Sciences Center is committed to Equal Opportunity and Affirmative Action.

### POSTDOCTORAL POSITION

A Postdoctoral position is available to study vesicular fusion and fission within the endocytic apparatus. We are particularly interested in the formation of lysosomes in eukaryotes. Interested applicants must have a recent Ph.D. with a background in either molecular biology or cell biology and should send their curriculum vitae and the names of three references to:

Jerry Kaplan, Ph.D.

Professor of Pathology

Division of Cell Biology and Immunology

Associate Dean for Research

Assistant Vice President for Basic Science

University of Utah

FAX: 801-581-4517

E-mail:

[diane\\_mcvey\\_ward@medschool.med.utah.edu](mailto:diane_mcvey_ward@medschool.med.utah.edu)

### POSTDOCTORAL FELLOWSHIP/RESEARCH

**ASSOCIATE** position. Available immediately for experienced and accomplished Molecular Biologist with recent Ph.D. to work as part of an interdisciplinary team investigating thrombosis and atherosclerosis. Experience in biochemistry and in the analysis of transgenic mice highly desirable. The appointment is for two years with an opportunity for career advancement. Send curriculum vitae with references to: Douglas Cines, M.D., Professor, Department of Pathology and Laboratory Medicine, University of Philadelphia, 513 Stellar Chance, 422 Curie Boulevard, Philadelphia, PA 19104.

E-mail: [dcines@mail.med.upenn.edu](mailto:dcines@mail.med.upenn.edu). Equal Opportunity Employer/Affirmative Action.

**POSTDOCTORAL POSITION** to study the mechanism of yeast chromosome condensation and its regulation during the cell cycle. Please send a curriculum vitae and the names, addresses, telephone numbers, and e-mail addresses of three references to:

Dr. Michael Christman

Department of Microbiology

Box 441, Jordan Hall

1300 Jefferson Park Avenue

School of Medicine

University of Virginia

Charlottesville, VA 22908

FAX: 804-982-1071

E-mail: [mfc3f@virginia.edu](mailto:mfc3f@virginia.edu)

### POSTDOCTORAL POSITION

A Postdoctoral position is available to study signal transduction pathways in the primitive pathogen *Trypanosoma brucei*. The NIH-funded project examines phospholipase A2 dependent calcium channels and arachidonic acid mediated cell death pathways. Experience with protein biochemistry and/or molecular cloning is required. Send curriculum vitae and the names of three references to: Dr. Larry Ruben, Department of Biological Sciences, Southern Methodist University, Dallas, TX 75275. E-mail: [lruben@post.smu.edu](mailto:lruben@post.smu.edu). Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

### TWO POSTDOCTORAL POSITIONS RNA PROCESSING AND HUMAN DISEASE

We are expanding our investigations into the molecular basis of myotonic dystrophy (*Science* p. 737, 1 May 1998 issue). We will identify genes regulated posttranscriptionally by CUG-BP, characterize the role of a novel CUG-BP isoform in myotonic dystrophy and regulated pre-mRNA splicing, and establish a mouse model for myotonic dystrophy. An additional project involves novel approaches for tissue-specific expression of therapeutic gene products using regulated RNA processing. A strong background in molecular biology or biochemistry is required. Send or e-mail curriculum vitae, a description of research experience and future goals, and names of three references (including telephone and e-mail) to: **Dr. Tom Cooper, Department of Pathology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030. Telephone: 713-798-3141; FAX: 713-798-5838; e-mail: tcooper@bcm.tmc.edu.** BCM is an Equal Opportunity/Affirmative Action/Equal Access Employer.

The Women's Research Institute has a **POSTDOCTORAL POSITION** available in July 1998. The successful applicant will be working in the laboratories of **Dr. Bo R. Rueda** and **Dr. John S. Davis** investigating the roles of cell signaling, steroid regulation, and cell death in the ovary. A Ph.D. in the biological sciences is required. Experience in nucleotide and protein isolation and analysis, protein biochemistry, and basic molecular techniques would be helpful but not necessary. Interested applicants should send a curriculum vitae, the names of three references, and a letter of interest to: **Dr. Rueda, The Women's Research Institute, Department of Obstetrics and Gynecology, The University of Kansas School of Medicine-Wichita, 1010 North Kansas, Wichita, KS 67214.** Applications will be accepted until August 1, 1998, or until a qualified individual is identified. *The Women's Research Institute is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL FELLOWSHIP IN MOTOR LEARNING

A position is available to participate in a research program employing several vertebrate animal models of motor learning, including classical conditioning, prism adaptation, and several operant conditioning paradigms. Techniques and approaches include chronic multiple single unit recording, inactivation studies, and experiments employing human subjects. To apply please send curriculum vitae, the names of three references, and a brief overview of your interests and previous work to: **James R. Bloedel, Chairman, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas Road, Phoenix, AZ 85013. E-mail: jbloedel@mha.chw.edu.** *Equal Opportunity Employer.*

### POSTDOCTORAL POSITION MOLECULAR CELL BIOLOGY Washington University School of Medicine

Position available to study regulation of cell surface receptors/endocytosis and the role of the ubiquitin system. Experience in molecular/cellular biology and/or biochemistry required. Send curriculum vitae and three reference names to: **Alan L. Schwartz, Ph.D., M.D., Box 8116, Washington University School of Medicine, St. Louis, MO 63110. E-mail: schwartz@kids.wustl.edu.** *An Equal Opportunity/Affirmative Action Employer. Minorities/Females/Disabled/Veterans.*

**POSTDOCTORAL POSITIONS** available immediately to identify and characterize genes involved in breast, ovarian, and prostate cancers. Ph.D., publications, and expertise in molecular biology are required. Send curriculum vitae and three letters of reference to: **Dr. Graham Casey, Ph.D., Department of Cancer Biology, NN10, The Lerner Research Institute, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195. FAX: 216-445-6269; e-mail: caseyg@cesmtp.ccf.org.**

**POSTDOCTORAL POSITION** available June 1, 1998, in neuroimmunology. The laboratory focuses on abnormal immune-brain interactions, and the current ongoing research projects are in multiple sclerosis, schizophrenia, and ALS. Applicants must have extensive experience in molecular biology and immunology. Send curriculum vitae and three references to: **Dr. Saud A. Sadiq, Program Director, Department of Neurology, St. Luke's-Roosevelt Hospital Center, Antenucci Building, 432 West 58th Street, Room 117, New York, NY 10019. FAX: 212-523-8859.** *Equal Opportunity Employer.*

## POSITIONS OPEN

### POSTDOCTORAL POSITIONS

Available after July 1998, Postdoctoral position(s) in the laboratory of **Dr. Joseph DiDonato** at the Lerner Research Institute of the Cleveland Clinic Foundation. Areas of interest will focus on molecular biology and biochemistry of NF $\kappa$ B and I Kappa B kinase (IKK) activation/regulation in response to extracellular stimuli, particularly by proinflammatory cytokines/molecules and pathogenic organisms (invasive bacteria/viruses/parasites) and NF $\kappa$ B's role in oncogenesis/tumorigenesis (see: **DiDonato et al., Nature 388:548-554; Mol. Cell. Biol. 15:1302-1311, 16:1295-1304; Science 270:286-290**). Applicants should be able to communicate in English and be experienced in most modern molecular biological techniques. Furthermore, it is advantageous to have experience in protein purification and expression/purification of recombinant proteins using baculovirus or yeast expression systems. Send curriculum vitae, the names of three references, and a one-page summary of previous research experience to: **Dr. Joseph DiDonato, Department of Cancer Biology, The Lerner Research Institute, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44195.**

**Molecular Neurobiologist/Neuroimmunologist (POSTDOCTORAL/RESEARCH ASSOCIATE/INSTRUCTOR)** to join multidisciplinary neuroscience group pursuing studies on cellular and molecular mechanisms by which central neuronal pathways offer protection from neuronal death *in vitro* and *in vivo*. Background/experience in either/and/or inflammation (cytokines), neurotrophic factors, cell adhesion molecules, intracellular signaling, apoptosis, genomics. Skills in molecular biology essential. The individual will also direct a Molecular Biology Core, and manage collaborative interactions academically and with industry. Strong opportunities exist for academic advancement at Cornell University Medical College. Contact: **D. J. Reis, Division of Neurobiology, Cornell University Medical College, 411 East 69th Street, New York, NY 10021. E-mail: djreis@mail.med.cornell.edu.** *Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.*

### POSTDOCTORAL POSITION PROTEIN STRUCTURE AND FUNCTION

A position is available immediately to study the interrelationship between protein structure and function. Molecular biology techniques will be utilized for creating altered enzymes to study specific aspects of their catalytic and regulatory mechanisms. Mutant proteins will be characterized by X-ray diffraction, kinetics, spectroscopy, as well as NMR. Candidates with a Ph.D. degree in crystallography or enzymology or molecular biology that want to extend their experience to the other areas are particularly encouraged to apply. Send curriculum vitae, names and telephone numbers of three references to: **Dr. Evan R. Kantrowitz, Department of Chemistry, Boston College, Chestnut Hill, MA 02167.**

Two **POSTDOCTORAL POSITIONS** are available at Roswell Park Cancer Institute.

(1) To develop novel DNA binding drugs as inhibitors of gene expression mediated by oncogenic transcription factors.

(2) To study cellular responses to DNA damaging antitumor drugs that result in inhibition of DNA replication.

Training in molecular biology is preferred. Submit a curriculum vitae and names of three references to: **Dr. Terry Beerman, Pharmacology and Therapeutics Department, Carlton and Elm Streets, Roswell Park Cancer Institute, Buffalo, NY 14263. FAX: 716-845-8857; e-mail: beerman@sc3101.med.buffalo.edu.**

**POSTDOCTORAL POSITION** to study proteins, folding polymers, or combinatorial chemical libraries using theory and simulation. Experience in theoretical chemistry, physics, or biophysics is preferred. Send curriculum vitae and letters of reference to: **J. G. Saven, Department of Chemistry, University of Pennsylvania, Philadelphia, PA 19104.** *Penn is an Affirmative Action/Equal Opportunity Employer.*

**POSTDOCTORAL POSITIONS** are available in structural biology. Projects include molecular modeling, structure-function analysis, and crystallization of lipid transfer proteins and lipoproteins, relevant to atherosclerosis. Send curriculum vitae to: **Dr. Alan Tall, Division of Molecular Medicine, Columbia University, 622 West 168th Street, New York, NY 10032.** *We take Affirmative Action toward Equal Employment Opportunity.*

## POSITIONS OPEN

### PHYSICAL CHEMISTRY, BIOPHYSICS, AND PHYSICS EXPERIMENTALISTS AND THEORISTS POSTDOCTORAL AND RESEARCH FACULTY

The Wilson group, at the University of California, San Diego, Department of Chemistry and Biochemistry, has positions available for exceptionally talented Scientists in the following areas: ultrafast X-ray diffraction and absorption applied to chemical and biochemical dynamics and function, dynamics of biomolecular and biological processes (including interneuronal communication and function) imaged using ultrafast microscopy, and theoretical studies related to these areas. For more information about these positions and the group, or to receive application process information, visit our website: <http://www.wilson.ucsd.edu> or e-mail: [wjgobops@ucsd.edu](mailto:wjgobops@ucsd.edu). Positions commensurate with experience and qualifications, with salaries based on University of California pay scales. *Affirmative Action/Equal Opportunity Employer.*

Four **POSTDOCTORAL POSITIONS** are available to become part of a multidisciplinary research program concerning the development of herpesvirus vectors for gene transfer, gene therapeutic approaches, and examine new gene therapy strategies for treatment of neurodegenerative diseases and cancer. Individuals should possess expertise in molecular biology techniques such as virus production, gel electrophoresis, gene cloning, and PCR as well as experience with a variety of cell culture or animal model systems.

Applicants should send a current curriculum vitae and list of references to: **Dr. Joseph Glorioso, Professor, Department of Molecular Genetics and Biochemistry, University of Pittsburgh School of Medicine, E1240 Biomedical Science Tower, Pittsburgh, PA 15261.** *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

### POSTDOCTORAL FELLOWSHIP UNIVERSITY OF MICHIGAN MEDICAL CENTER

Position available. The work focus will be on the cell biological and molecular aspects of glomerular epithelial cell (podocyte) function and the potential role of this cell in glomerular diseases leading to the nephrotic syndrome and focal segmental glomerulosclerosis. Molecular and cellular biologic experience required. Ph.D./M.D. acceptable. Send curriculum vitae and names of three references to: **Roger Wiggins, Nephrology Division, 3914 Taubman Center, University of Michigan, Ann Arbor, MI 48109-0364.** *University of Michigan is an Equal Opportunity Employer.*

**POSTDOCTORAL POSITION** in biochemistry available immediately. This research aims to understand the reactions and regulation of the dolichol-linked glycosylation pathway using somatic cell mutants. The research will focus on *in vitro* assays of membrane-associated enzymes, including the oligosaccharyl transferase. *Funding available for U.S. citizens and permanent residents only.* Send curriculum vitae and names of three references to: **Dr. S. S. Krag, Department of Biochemistry, Johns Hopkins University, 615 North Wolfe Street, Baltimore, MD 21205. E-mail: sskrag@welchlink.welch.jhu.edu.** *JHU is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available immediately to study the role played by the ubiquitin/ATP-dependent pathway in neurodegeneration. A strong background in molecular biology is required. Please send curriculum vitae and name and telephone of three references to: **Dr. Maria Figueiredo-Pereira, Hunter College, Department of Biological Sciences, 695 Park Avenue, New York, NY 10021. FAX: 212-772-5227.** *Equal Opportunity Employer.*

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GENE THERAPY REFERENCES

Chen, L., Perlick, H., Morgan, P. A. Comparison of retroviral and adeno-associated viral vectors designed to express human clotting factor IX. *Human Gene Therapy* 8:171-185, 1997.

Heller, R., Jaroszeski, M.J., Dang, V., Racan. *Proceedings of The Second World Congress for Electricity and Magnetism in Biology and Medicine* 69, 1997.

Jaroszeski, M.J., Gilbert, R.A., Nicolau. *Proceedings of The Second World Congress for Electricity and Magnetism in Biology and Medicine* 69, 1997.

Katkin, J.P., Hus. *Human Gene Therapy* 8:171-185, 1997.

Kim, M., Wright, M., Deshane, J., R.D., Grizzle, W.E., Curiel, D.T. *Human Gene Therapy* 8:157-170, 1997.

Krui K: Leading new technologies 1997.

Muramatsu T: In vivo electroporation 1997

## New In vivo Applications

Nishi T, Dev SB, Yoshizato K, Ku. *Human Cell* 10(1): 81-86, 1997.

Nishi T, Goto T, Yoshizato K, Tak. *Proceedings Sixth International Co*

Nishi, T., Yoshizato, K., Yamash. Ushio, Y. *Electro-genetherapy of b Association of Cancer Research* 38

Dev, S.B., Giordano, F.J., Brown, D.L. Can endoluminal gene delivery by pulsed electric field overcome the current deficiencies of gene therapy for cardiovascular diseases? *Proceedings of Bioelectrochemistry and Bioenergetics* 113, 1996.

## ...the ENHANCER™ 400, the only graphic wave display monitor designed exclusively for electroporation

Fakhrai, H., Dorigo, O., Shawler, D.L., Lin, H., Mercola, D., Black, K.L., Royston, I., Sobol, R.E. Eradication of established intracranial rat gliomas by transforming growth factor B antisense gene therapy. *Proceedings of the National Academy of Science* 93:2909-2914, 1996.

## THE LATEST NEWS!

Giordano, F.J., De. *Proceedings of the* • In vivo Square Wave Electroporation... "May be more efficient than the other two nonviral methods" (Lipofection and the Gene Gun)

Heller, R., Jarosze. expression in rat li • "In vivo electroporation has a variety of advantages over viral vectors..."

Muramatsu T, Miz. embryos. *Animal S* • "In an in vivo situation, square pulses should be used as they are far better than exponential decay pulses for higher gene expression"

Nishi, T., Yoshiza. Ushio, Y. High efficiency i *Research* 56:1050-1055, 1 • T. Muramatsu, et al; "In vivo electroporation: A powerful and convenient means of nonviral gene transfer to tissues of living animals (Review)"

Nomura, M., Nakata, Y., I. *International Journal of Molecular Medicine*, 1: 55-62 (1998)

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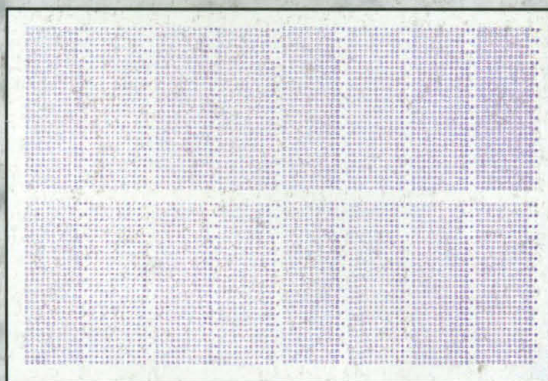
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- Ref 1. Lennon, G., Auffray, C., Polymeropoulos, M., Soares, M.B. (1996) *Genomics* 33, 151-152.  
 2. <http://www.ncbi.nlm.nih.gov/UniGene/index.html>

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