

A Science Advertising Supplement

Career Opportunities and Graduate Programs for BS/MS Scientists

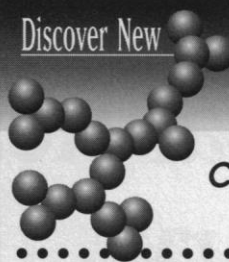


Bright Career Prospects for Core Scientists of the Biopharmaceutical Industry

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An, Z. et al. *Anticancer Research*, 16, 2546-2552, 1996.

Wang, X. et al. *Cancer Research*, 54, 4726-28, 1994.

Holzman, D. *Journal of the National Cancer Institute* 88, 396-397, 1996.

Hoffman, R., J. *Cellular biochem*, 56, 1-4, 1994.

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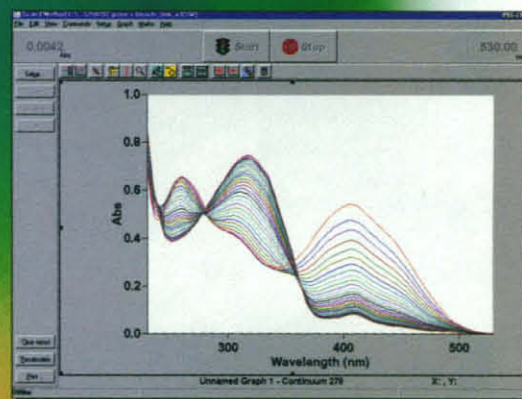
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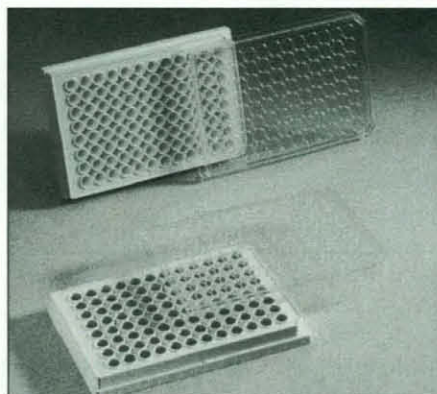
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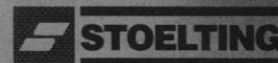
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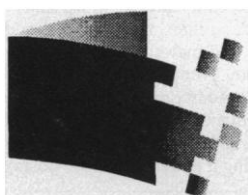
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Recruitment Advertising Supplement Directory

Career Opportunities and Graduate Programs for BS/MS Scientists

Bright Career Prospects for Core Scientists
of the Biopharmaceutical Industry



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Career Opportunities and Graduate Programs for BS/MS Scientists



- | Scriptgen Pharmaceuticals, Inc.
- | Novartis Agribusiness Biotechnology Research, Inc.
- | Boehringer Ingelheim Pharmaceuticals
- | SAIC Frederick



- | Pennsylvania State University
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BS/MS Scientists

Allergy and Respiratory Group

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Job Code: 2761

Inflammation Group

BS/MS scientists are sought to conduct pharmacological experiments to investigate the activity of new anti-inflammatory drugs. *In vivo* experience required; knowledge of cell culture techniques desirable.

Job Code: 2762

Neuroscience-Neurodegenerative Diseases

We seek a highly motivated and talented individual with strong communication, problem solving and analytical skills to conduct exploratory research in neurodegenerative diseases. The successful candidate will have a BS/MS degree in biological sciences and at least 2 years' laboratory experience in biochemistry, pharmacology or a related discipline. Experience in assay development, immunochemical techniques, protein-protein interaction and cell culture preferred.

Job Code: 2763

Neuroscience-Psychotherapeutics

Join a team seeking novel pharmacotherapeutic agents to treat anxiety, depression, psychosis and substance abuse. The successful candidate will have a BS degree with 4 years' experience or an MS degree with 2 years' experience in drug discovery, including *in vivo* techniques, receptor binding, second messenger systems and cell culture experience. Molecular biology experience including automated high-throughput screening preferred.

Job Code: 2764

Beyond The Boundaries.

Drug Metabolism Discovery and Development

As a member of a multidisciplinary laboratory, working in either preclinical or development phases of novel drug discovery, you will conduct *in vivo* and *in vitro* drug metabolism and pharmacokinetic/toxicokinetic studies through the use of *in vitro* metabolism and absorption studies, *in vivo* administration of drugs, collection of biological samples, and development/utilization of bioanalytical methods for monitoring drugs and metabolites using state-of-the-art technology. A degree in biochemistry, chemistry or pharmaceutical sciences is required. Experience in HPLC, LC/MS and/or *in vitro* metabolism techniques (microsomes, slices and recombinant enzymes) with some GLP background is preferred.

Job Code: 2765

Drug Metabolism Technology

As a member of a core technology group, you will participate in drug discovery by developing and applying mass spectrometry to the study of pharmacokinetics and drug metabolism. You will be responsible for high-throughput LC/MS quantitation of *in vitro* samples, maintenance of LC/MS instrumentation, and collation and reporting of data throughout Pfizer. You will be involved in close collaborations with biological and analytical technology labs to advance high-throughput drug metabolism technologies. Qualified candidates will have a BS/MS or equivalent degree in chemistry/biology or a related field, and superior interpersonal and oral/written communication skills. Significant experience in the operation and maintenance of LC/MS instrumentation is highly desirable. Experience in HPLC, automation and *in vitro* drug metabolism studies is desirable.

Job Code: 2766

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Job Code: 2767

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Job Code: 2768

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Job Code: 2769

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Bright Career Prospects for Core Scientists of the Biopharmaceutical Industry

Talk about career opportunities in the biopharmaceutical industry, and it's hard to beat those awaiting individuals with the AA, BA, BS, MA, and MS degrees. The biopharma job market is red hot, with highly qualified applicants

often able to pick the best of several offers. The jobs carry all the excitement and sense of personal fulfillment that is synonymous with modern biotechnology and pharmaceutical research. A Bachelor's or Master's degree prepares individuals for a wide range of bench-side research or crossover fields. It also means flexibility sometimes lost with a Ph.D. After sampling one area of research, many BS/MS scientists feel more at ease making one of those 180-degree turnabouts into a new area than an individual who has invested the time and effort involved in a Ph.D. And it's a career in which people just starting a career can make a real impact in the world, in which their creativity and hard work translates into longer, healthier, happier lives for other people. Indeed, BS/MS-level workers are the core scientists in the biopharma industry who conduct the vast majority of research in the typical lab.

Consider the situation when it comes time to enhance that degree. Employers not only encourage BS/MS scientists to seek advanced degrees, they usually pay the bill. New and innovative graduate programs await those who transition toward an advanced degree.

We sampled the BS/MS career scene at Scriptgen Pharmaceuticals, Inc., Novartis Agribusiness Biotechnology Research, Inc., Boehringer Ingelheim Pharmaceuticals, and SAIC Frederick. Then we moved on to talk about graduate programs at the Pennsylvania State University, Ohio State University, Duke University, and the University of Texas at Arlington.

Michael G. Palfreyman, Ph.D., D.Sc., Scriptgen Pharmaceuticals, Inc.: "The Job Market for BS/MS Candidates is Incredibly Hot"



Michael G. Palfreyman

WALTHAM, MA—Every biopharmaceutical company gets excited over applicants with hands-on experience in industry or university laboratories. Yet the experienced applicant is all too rare at the BS/MS level. With demand for BS/MS scientists far exceeding supply, employers reconcile the ideal and the reality.

For perspectives on the current bull market, and how employers reconcile the ideal with the reality in

terms of experience, we turned to Michael G. Palfreyman, Ph.D., D.Sc., senior vice president of research and development at Scriptgen Pharmaceuticals, Inc. Scriptgen has developed proprietary technologies, such as ATLAS, to speed the discovery of antimicrobial drugs, including those for treatment of hepatitis and HIV. ATLAS allows even poorly characterized proteins to be screened as drug candidates in a high-throughput fashion.

Palfreyman, who holds a Ph.D. in neurochemistry, views the topic with the wisdom of almost 30 years of experience in Europe and the United States that began in big established pharmas. He moved to Scriptgen in 1994, as the biotech company's 11th em-

ployee, and guides its small-molecule drug discovery program.

Here are some of Palfreyman's reflections:

The job market at the moment is incredibly hot, an opportunity market for qualified BS/MS candidates. In fact, the situation is so acute that many companies have begun to recruit from overseas for these positions. Increasingly, companies are turning to Western Europe, China, Japan. The demand is really unprecedented in my experience. Years ago, a company would put an advertisement in the best journals, in *Science*, for instance, and easily attract 100 curricula vitae. Now, even advertising in *Science*, you may get only 20 or 30 for each BS/MS opening.

Demand is especially acute for degrees that prepare people for careers in biotechnology, the chemical sciences, and information sciences. There's a massive need for individuals with a biological science or chemical science background and the ability to understand and use computers, and work with large data sets like those coming out of the genome projects.

What does Scriptgen look for in an applicant?

We constantly look for BS/MS people who have had some hands-on research experience. Scriptgen has an active cooperative program with three universities in the Boston area where BS students can take a six-month sabbatical, and work in our

Michael Woods writes frequently on the biotechnology and pharmaceutical industries.

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Combinatorial Chemist Design parallel synthesis technologies for development of novel drug candidates. Requires a BS or MS in Chemistry or Medicinal Chemistry. Experience in combinatorial chemistry desired. **Job Code: CHEM-COMB1-YX**

Analytical Chemists Seeking MS/BS candidates who have degrees in Analytical Chemistry, Chemistry or Biochemistry, and have experience in the analysis of small molecule drug candidates and metabolites in a biological system. Candidates must be team players and work closely with scientists in medicinal chemistry and biochemistry groups. **Job Code: CHEM-AC2-AC**

Group Leader - Antibacterial Drug Discovery Manage a broad spectrum of projects related to antibacterial drug discovery research, including discovery of new antibiotics from screening to identification of pre-clinical targets. Lead the team in establishing and maintaining outside calibrations, while working in a collaborative environment. Position requires a PhD with 5-10 years' experience in microbiology, molecular techniques and extensive experience working with antibacterials. Experience in pharmacology/biochemistry, knowledge of bacterial molecular genetics and new antibiotic screens is necessary, as well as bench research experience within the last 5 years. Previous supervisory experience and strong project management skills required, along with interpersonal, organizational and communication skills. **Job Code: DD-GL-RW**

PhD Molecular Cell Biologist Develop cutting-edge technologies of the discovery and validation of novel therapeutic targets in mammalian cells. Requires extensive expertise in molecular cell biology (DNA transfection methods and the use of retroviral vectors). Also requires in-depth knowledge concerning antisense or other state-of-the-art approaches of manipulation of gene expression in mammalian cell lines. A PhD with 2+ years' postdoctoral experience is necessary. **Job Code: DD-CELL2-JH**

Computer Scientist/Bioinformatics Develop DNA sequence analysis software tools to address Scriptgen's specific computing needs. Requires a BS/MS, expertise in database design/management, UNIX system administration and programming (C, C++, PERL) experience. **Job Code: DD-CSB-JM**

BS/MS Associate Scientist - AntiFungal Conduct research in a rapidly growing antifungal drug discovery program. Requires a BS and/or MS, 1-2 years' experience in molecular biology/genetics, as well as strong interpersonal, organizational and communication skills. **Job Code: DD-FGL2-CD**

BS/MS Cell/Molecular Biologist - Coalescent Drug Design Join a highly collaborative interdisciplinary drug discovery program involving: cloning, mutagenesis, protein expression, purification as well as cell culture. Requires 2 years' laboratory experience in molecular biological and cellular methods for protein targets. Experience with cloning, mutagenesis and expression in *E. coli* and in mammalian cell culture, as well as with immunoassays preferred. **Job Code: DDT-CDD1-JW**

BS/MS Biochemists - Coalescent Drug Design Participate in exciting, highly collaborative drug discovery program. Requires 2-5 years' laboratory experience in biochemical methods (analytical techniques, protein chemistry and protein activity assays). Familiarity with ligand binding experiments and mathematical modeling in data analysis strongly preferred. Experience with drug discovery, high-throughput screens, protein folding, or immunoassays a plus. **Job Code: DDT-CDD2-DW**

BS/MS Molecular Geneticist Characterize antifungal therapeutic targets and perform mechanism of action studies on novel antifungal compounds. Requires an MS or BS degree in Biochemistry, Molecular Biology, Genetics or Microbiology, as well as 2 years' experience in molecular cloning techniques (microbial systems). Experience with protein purification or developing biochemical assays highly desirable. **Job Code: DD-FGL1-DM**

BS/MS Molecular Biologist Or Biochemist Requires a background in cloning, expression and purification of proteins, as well as a deep commitment to team-oriented research. Experience with cell culture techniques is a plus. **Job Code: DD-BAC5-YC**

RNA Technology The following two positions involve functional, biochemical and biophysical studies of RNA targets and their small molecule ligands. Successful candidates must have experience utilizing techniques (RNA synthesis and labeling, secondary structure analysis, antisense oligonucleotide technology, thermodynamic characterization techniques, fluorescence labeling/detection methods, binding kinetics, capillary electrophoresis and nucleic acid enzymology).

Research Associate Requires a BS/MS and 2 years' experience working with RNA. **Job Code: DDT-RNA1-JA**

Scientist Requires a PhD with 3+ years' experience working with RNA. **Job Code: DDT-RNA2-JA**

BS/MS Biochemists/Protein Chemists Develop novel drug discovery technologies. Requires 1-2 years' experience in protein chemistry or related field. Experience in analysis of protein-protein interactions, enzyme-antibody conjugation and assay development highly desired. **Job Code: DDT-AFF20-AC**

MS/PhD Protein Biophysicist/Protein Folding Work on biophysical characterization and investigation of the thermal stability of macromolecular targets in highly collaborative interdisciplinary drug discovery programs. Requires 3-5 years' experience with biophysical techniques (CD, fluorescence, calorimetry and light scattering) and facility with protein biochemical methods (mutagenesis, protein expression and purification, gel electrophoresis and measurement of enzymatic and binding activities). Experience in matters of protein folding strongly preferred. **Job Code: DDT-AFF15-AC**

MS/PhD Biochemist Be part of a team in developing drug discovery technologies. A PhD or MS with 3+ years' experience in developing high throughput homogeneous affinity-based assays. Assay development, applied fluorescence spectroscopic and other applied analytical techniques amenable to adaptation for use in high throughput screening preferred. **Job Code: DDT-AFF19-AC**

Postdoctoral Fellow, Molecular Cell Biology Develop target validation strategies in mammalian cells in culture using molecular genetic or antisense approaches. Requires a PhD in Molecular Biology, Genetics, Microbiology, Biochemistry or related discipline. **Job Code: DD-PDCCELL-JH**

Postdoctoral Fellow, Membrane Protein Biochemistry Join a multidisciplinary group to develop high throughput screens for membrane protein ligand discovery. Experience in GPCR expression, purification and ligand binding analysis preferred. **Job Code: DDT-PD14-SC**

Postdoctoral Fellow, Fungal Molecular Genetics Determine the mechanism of action of novel antifungal compounds. This post-doctoral position requires a PhD with a background in molecular genetics of fungi. Experience with *Saccharomyces cerevisiae* desired. **Job Code: DD-PD-DM**

Postdoctoral Fellow, AntiVirals Requires a PhD and experience in HCV and HBV replication. **Job Code: DDT-PD11-VB**

SCRIPTGEN offers competitive salaries and benefits, along with equity participation. Please send resume, indicating appropriate Job Code, to: SCRIPTGEN Pharmaceuticals, Inc., 610 Lincoln Street, Waltham, MA 02154. Fax: 781-768-5629. E-mail: hr@scriptgen.com Inclusion of Job Code is essential for consideration. An equal opportunity employer, m/f/d/v.

SCRIPTGEN

Fellowships for Biological and Biomedical Sciences

The Howard Hughes Medical Institute announces the 1999 competitions for fellowship programs that support training in fundamental biological and biomedical research. Awards, based on international competitions, focus on research directed to understanding basic biological processes or disease mechanisms. Fellowships may be held at academic or nonprofit research institutions.

Predoctoral Fellowships in Biological Sciences

Up to five years of support for full-time graduate study toward a Ph.D. degree in cell or developmental biology, genetics or molecular biology, immunology or microbiology, mathematical biology or epidemiology, neuroscience or physiology, structural biology or biochemistry, or related fields. Applicants must not have completed the first year of postbaccalaureate graduate study in biology. *Application deadline: mid-November.*

Postdoctoral Research Fellowships for Physicians

Three years of support for training in fundamental research subsequent to at least two years of postgraduate clinical training and no more than two years of postdoctoral research training. *Application deadline: early December.*

Research Training Fellowships for Medical Students

An opportunity for medical students in the United States to explore a burgeoning interest in fundamental research. Support is awarded for one year of full-time fundamental research in a laboratory at the student's medical school or another institution (except NIH in Bethesda, Maryland). *Application deadline: early December.*

Research Scholars at the National Institutes of Health

Under this joint HHMI-NIH program, medical students in the United States spend an intensive year in research in the intramural program at NIH in Bethesda, Maryland. Residence is provided at the Cloister on the NIH campus. *Application deadline: early January.*

1999 Program Announcements and Applications

For Predoctoral Fellowships:

Hughes Fellowship Program
Fellowship Programs Unit
National Research Council
2101 Constitution Avenue
Washington, DC 20418
United States of America
Telephone (202) 334-2872
Fax (202) 334-3419
E-mail infofell@nas.edu
<http://fellowships.nas.edu>

For Other Programs:

Howard Hughes Medical Institute
Office of Grants and Special Programs
Department AO99
4000 Jones Bridge Road
Chevy Chase MD 20815-6789
United States of America
Telephone (301) 215-8889
Fax (301) 215-8888
E-mail fellows@hhmi.org
www.hhmi.org/fellowships

The Howard Hughes Medical Institute, an Equal Opportunity Employer, welcomes applications from all qualified candidates and encourages women and members of minority groups to apply.

Beyond Medicine To Health™

BS/MS Scientists

As one of the world's leading pharmaceutical companies, Hoechst Marion Roussel is committed to discovering and developing a wide range of innovative pharmaceuticals for our customers in the United States and around the globe. Today's complex marketplace demands fresh thinking and new approaches. We've responded in the United States by creating a dynamic, flexible company that is dedicated to anticipating, understanding and responding to your needs.

Ultimately, our focus is on the people of Hoechst Marion Roussel, individuals whose daily efforts and commitment continue to drive our piece of the revolution in the global pharmaceutical industry. We seek the right people to join that effort - champions of change whose innovation, energy and ideas will propel our company into the 21st century. We offer in return an innovative workplace where diversity and creative challenges lead to individual learning and growth, as well as reward for a job well done. We are seeking both new and experienced BS/MS graduates in the following disciplines:

- Molecular Biology
- Cell Biology
- Biochemistry
- Protein Biochemistry
- Pharmacology
- Physiology
- Organic Chemistry
- Medicinal Chemistry

These Opportunities exist at our North American Research Center in Bridgewater, NJ.

Attracting and retaining top talent is a high priority at Hoechst Marion Roussel. That is why we offer one of the most outstanding and comprehensive compensation and benefits packages in the pharmaceutical industry. Our total rewards package includes competitive compensation and bonus programs, flexible medical and dental plans, tuition assistance, income protection plans, and generous retirement plans that have been cited as the best in the industry. For consideration, mail your resume (suitable for scanning) including salary history/requirements, to: **Staffing Manager, D-103H, Ref 1998BW21, Hoechst Marion Roussel, Routes 202-206, P.O. Box 6800, Bridgewater, New Jersey 08807-0800, U.S.A., or e-mail: jobs@hmri.com.** For additional company information, we invite you to visit our website: www.hmri.com. An affirmative action employer M/F/D/V.

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CAMBRIDGE, MA.**

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labs. When they graduate, they obviously are already high on the priority list of potential candidates to join the company full time. These are people with hands-on experience, and it's experience in the techniques we use.

But we recognize that it's not always possible to find candidates with a great deal of experience. So the most important characteristic in a job candidate really is an attitude toward learning, an intellectual curiosity. The types of skills these individuals must apply often are broader-based than the skills they've learned. We often anticipate a significant on-the-job and continuing education process. We provide training courses and tuition reimbursement for our BS/MS people. We anticipate that BS/MS scientists will be given opportunities to grow in their jobs, taking on greater and greater responsibilities as their experience grows. An applicant who displays a positive attitude, a willingness to learn, definitely can compensate for the lack of actual experience.

Dean Stults, Teresa McMiller, and Nancy Torkewitz at Novartis Agribusiness Biotech: **"Excellent Job Opportunities..."**



Dean Stults

RESEARCH TRIANGLE PARK, NC—Human resources staff at Novartis Agribusiness Biotechnology Research, Inc. (NABRI) will be heavily involved in recruitment of new scientists during the next two years. The subsidiary does genetics and biotechnology research to support the crop protection, seeds, and animal health units of Novartis, the life sciences firm formed last year in the merger of Ciba and Sandoz.

NABRI's scientific staff will grow from the current 180 to 300, as the company expands and strengthens the research base for its agribusiness division. In addition, a new organization called the Novartis Agricultural Discovery Institute is being formed in La Jolla, California. About 150 scientists will join that group to conduct basic agribusiness research in genomics, bioinformatics, and related fields.

We gathered together three human resources professionals responsible for much of that recruiting for a roundtable discussion about the role BS/MS scientists will play in the excitement. Dean Stults has an undergraduate degree in computer and electrical engineering, and a Master's in industrial administration. Nancy Torkewitz, who has a BS in plant pathology and 18 years of experience in bench-side research, joined Novartis's human resources team this year. Human resources executive Teresa McMiller has a BS in business administration, eight years of experience with Novartis, and seven in human resources.

Dean Stults: Job opportunities for individuals at the BS/MS level right now are excellent and the career prospects within

**"People with BS
or MS degrees
really are our core
scientists. We
estimate that they
account for about
70 percent of our
work force here."**

Nancy Torkewitz,
Novartis Agribusiness
Biotech

Novartis are just about endless. One of the advantages of being in a company of this size, with more than 100,000 employees worldwide, is the opportunity to expand your career. Individuals at the BS/MS level can live in many different



Nancy Torkewitz

parts of the country or a variety of locations overseas. There are ample opportunities to move into different areas of research. For individuals with a Bachelor's or Master's degree who don't plan a life-long career in bench-side research, there are wonderful opportunities in other parts of the company. In scientific management, for instance, people with a BS or MS

degree have the basis for a career in business development, licensing and contracts, regulatory and government affairs.

Nancy Torkewitz: People with BS or MS degrees really are our core scientists. We estimate that they account for about 70 percent of our work force here. About 50 percent of our new hiring during the next two years will be BS/MS individuals. BS/MS scientists do a great deal of bench-side research, but their contributions don't stop in the lab. They are active participants in all phases of science. BS/MS scientists participate in group meetings, present papers and posters at national scientific meetings, and their names go on patents just like the Ph.D. scientists. There's nothing to limit their career growth either. We have several individuals with years of experience

whose job titles and responsibilities are at least as high as those held by people with a doctorate. BS/MS degrees also are very versatile. An individual with a degree in molecular biology, for instance, has the basic skills to work on many different research projects.

Teresa McMiller: What are the hottest career fields in science right now at the BS/MS level? There are especially good opportunities for men and women with a background

in molecular biology, bioinformatics, genomics, and proteomics. Demand in these areas should continue strong in the years ahead. If I were offering advice to current students, I'd suggest broadening their educational base beyond science. Take a few courses in general business management, for instance. A science-business combination is still relatively rare. It may help catch a recruiter's attention for entry-level positions, and pave the way later if you decide to move from the lab into another area. With the growing emphasis on computational biology, students in the life sciences also should consider taking

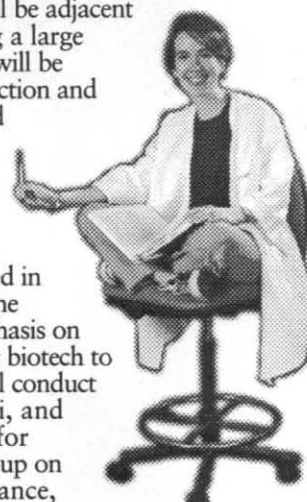
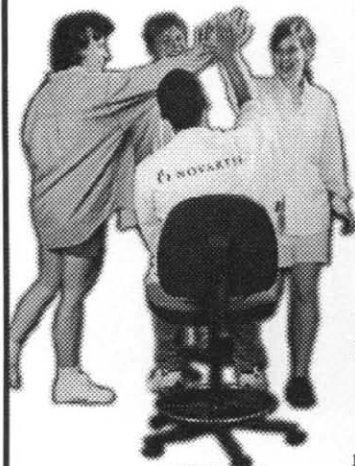


Teresa McMiller

We're EXPANDING our Top-notch group of Scientists.

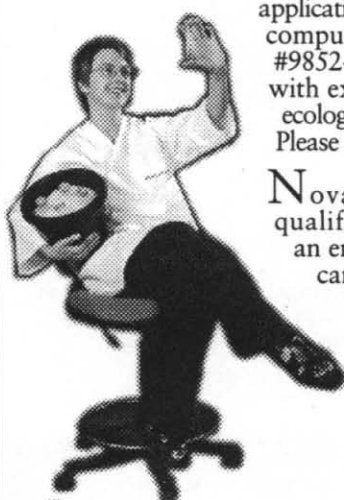
Innovative. Progressive. Responsive. This best describes our research philosophy at Novartis Agribusiness, a world leader with prominent positions in Seeds, Crop Protection, and Animal Health. Our mission is to make discoveries that enable the creation of novel seeds, new methods of protecting crops, and new animal health products that enhance human life in an environmentally sustainable manner.

The Novartis Research Foundation recently announced the planned investment of \$600 million over the next 10 years to fund one of the largest initiatives in plant genomics. The first step has been the creation of the **Novartis Agricultural Discovery Institute (NADI)**, which will be one of the largest single research endeavors dedicated to agricultural genomics research and development. Located in La Jolla, Calif., the main campus of NADI will have a team of about 180 researchers headed by Dr. Steven P. Briggs. NADI will be adjacent to the Novartis Functional Genomics Institute, creating a large critical mass in genomics research. The focus of NADI will be matching genes with traits, primarily through the production and exploitation of gene and protein databases, supported by tools for testing function. Protein structure and engineering will also be emphasized. Plants, fungi, bacteria, viruses, nematodes, and insects will be studied. We will take full advantage of model systems.



Novartis Agribusiness Biotechnology, Inc. (NABRI), located in Research Triangle Park, North Carolina, will continue as the hub for the Novartis biotechnology research, with an emphasis on identifying and experimentally evaluating opportunities for biotech to impact our businesses. The 200 scientists at this facility will conduct research on validation on novel targets in plants, fungi, and invertebrates, implementation of novel assay technology for identifying novel ligands for those targets, and synthesis follow-up on hits from those assays. This includes the current activities in disease tolerance, insect tolerance, and transformation technology, but will be expanded to include more crops. In addition, several projects related to improving the quality of output properties of crops will commence.

We have a large number of open positions to fill over the next several months. At NADI, we invite applications from scientists at all levels with expertise in molecular genetics, protein chemistry, computational biology, and plant physiology. Please respond to Position #9852-SM-DI. At NABRI, we invite applications from scientists at all levels with expertise in plant, fungal, and insect molecular biology, microbial ecology, plant transformation, biochemistry, and synthetic organic chemistry. Please respond to Position #9853-SM-BRI.



Novartis offers a competitive salary commensurate with qualifications and experience, a comprehensive benefits package, and an environment conducive to professional achievement. Qualified candidates please paste your c.v. (including a skills list), followed by your coverletter, into the body of an e-mail and send to biotech.jobs@cp.novartis.com. Indicate the position #____ in the subject area. To ensure that your information is uploaded into our HR System, please do not send your resume and coverletter as attachments. An Equal Opportunity Employer.



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which come after years of work, when the veil
over nature’s secret suddenly seems to lift....”

— DR. GERTY CORI



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Chemical Process Development Director, Pilot Plant Operations

Position in New Brunswick, NJ for a Ph.D. in Chemical Engineering or equivalent with 10+ years of experience to provide integrated management for the three Pilot Plant areas of organic chemistry, fermentation, and natural products processing. 3-5 years experience in Pilot Plant management necessary. Individual should have a strong background in bulk pharmaceutical, natural products and fermentation process development, be a highly organized administrator, skilled in union relations issues, and be capable of re-engineering piloting activities for efficiency. The position requires the strategic prioritization of projects, compliance in areas of GMP, safety, and environment, and the technical expertise to ensure error-free process development and implementation. **Code: PRMS43MF**

Research Investigator - Virology

Position in Wallingford, CT for a Ph.D. with post-doctoral experience and a demonstrated record of achievement in Biochemistry or Enzymology. Expertise in the area of viral enzymes, polymerases, hepatitis C virus, or related positive strand RNA viruses is strongly preferred. The successful candidate will conduct independent research in antiviral drug discovery, including novel targets, lead discovery, and drug development. **Code: PRCC43SW**

Research Scientist - Applied Genomics

Position in Wallingford, CT for a B.S./M.S. scientist with 5-10 years experience in DNA cloning, DNA sequencing, PCR, and DNA/RNA hybridization. A molecular biology background is preferred. Familiarity with microbial genetics and standard DNA analysis software is desirable. **Code: PRCC43BD**

Drug Discovery Chemistry

Positions available in our NJ and CT facilities.

**We will be
conducting chemistry
interviews at the ACS
meeting in Boston**

Organic Chemists -
B.S./M.S. degree in
Organic Chemistry is
required along with a
minimum of 2 years relevant
research experience.

Under the direction of a supervising scientist, you will be responsible for the synthesis of novel pharmacologically active compounds using organic synthesis techniques and combinatorial approaches. Candidates must possess sound knowledge of the practical and theoretical aspects of synthetic organic chemistry including familiarity with modern analytical techniques for compound purification and characterization. **Code: PRTG43GV1**

Combinatorial Chemists - B.S./M.S. in Organic Chemistry is required along with laboratory experience in modern spectroscopic and experimental techniques and preparative chromatography, with a working knowledge of synthetic organic chemistry. Candidates selected will use state-of-the-art technology in high-throughput synthesis and purification. **Code: PRTG43GV2**

Associate Director - Drug Supplies Coordinator

Position in New Brunswick, NJ for a Ph.D. in Chemistry or Chemical Engineering to develop a bulk drug substance project management system to predict quantity and timing of raw materials for R&D projects. This position will work with project teams to make sure supply needs are understood, develop strategic cost-of-goods positions, negotiate with vendors, and arrange for purchase of materials to meet project timelines.

Individual must be able to work collaboratively, establish strong networks with BMS vendors, and be able to organize large amounts of information to reach a decision for management approval and implementation with vendors. Prior experience with project management and spreadsheet applications is required. **Code: PRMS43JS**

Drug Discovery - Pulmonary Diseases

A major expansion of our pulmonary drug discovery and development research in Princeton, NJ, has created opportunities for talented and highly motivated Ph.D. and B.S./M.S. scientists to pursue innovative approaches to the discovery of new drug targets in asthma and chronic pulmonary disease. **Code: PRSM43DJ**

Associate Research Scientist - Lead Discovery

Position in Princeton, NJ for a B.S./M.S. scientist proficient in screening techniques (receptor binding, fluorescence-based assays, reporter screens, SPA, HTRF, etc.). Experience in G protein-coupled receptors desirable and interest/experience in ion channels advantageous. **Code: PRSM43KD**

Computer-Assisted Drug Design (CADD) - Group Leader

Position in Princeton, NJ for an experienced Ph.D. to join a large and expanding CADD team. Candidate should have a broad expertise in the application of CADD methods to drug discovery with at least 10 years relevant experience. This position, as Group Leader/Principal Scientist, reports to the Director, CADD. **Code: PRSM43JM**

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For Wallingford, Connecticut positions, reply to:

**Bristol-Myers Squibb Company
Pharmaceutical Research Institute
P.O. Box 5101, 5 Research Parkway
Wallingford, CT 06492-7661
FAX: 203-284-7762**

For all New Jersey positions, reply to:

**Bristol-Myers Squibb Company
Pharmaceutical Research Institute
P.O. Box 4000, Princeton, NJ 08543-4000
FAX: 609-581-8841**

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some basic computer science courses, such as programming or database management.

Dean Stults: We certainly encourage employees to enhance their degrees, as well. That includes 100 percent tuition reimbursement for graduate courses. One of the advantages of this region is the number of good universities within a 15-mile radius where people can pursue advanced studies. We have a summer internship program that gives students at these universities practical hands-on experience. A lot of them wind up as full-time employees after completing their degrees.

Teresa McMiller: Applicants should have excellent scientific qualifications, of course. Since we expect BS/MS scientists to make major contributions, we look for individuals who show eagerness and enthusiasm, a willingness to grow, learn new techniques, and continue learning.

Nancy Torkewitz: Leadership ability, commitment, and motivation also can give one applicant an edge over another. How can a BS/MS-level scientist demonstrate these traits? On a résumé, be sure to indicate if you were an officer of a sorority, fraternity, or club. Participation on a sports team or involvement in community service also can be important.

Caswall Price, Boehringer Ingelheim Pharmaceuticals, Inc.: **"BS/MS Scientists Often Are the Leaders in Many Labs"**



Caswall Price

RIDGEFIELD, CT—With a BS and MS in chemistry and almost seven years of bench-side research experience in drug metabolism and pharmacokinetics, Caswall Price is well aware of the important role that BS/MS scientists play in biopharmaceutical research.

"In most organizations, these individuals do most of the bench-level analysis and tests and generate the critical, important data that are

used to support the drug pipeline," Price, senior human resources specialist, noted. "Typically well-trained and very proficient, BS/MS individuals often are the leaders in many labs."

Boehringer Ingelheim Pharmaceuticals, one of the subsidiaries of the Boehringer Ingelheim Corporation in the United States, focuses on the research, manufacture, and marketing of a range of innovative pharmaceutical products. These include Atrovent for the treatment of pulmonary diseases, including chronic bronchitis and emphysema.

Excellent career opportunities exist for BS/MS scientists in each of Boehringer Ingelheim's areas of focus, said Price, who now applies his wealth of scientific expertise in scientific recruiting and staffing in human resources. About two-thirds of Boehringer Ingelheim's R&D employees work at the BS/MS level.

"The job market is very robust for BS/MS-level job seekers.

**"Typically
well-trained and
very proficient,
BS/MS individuals
often are
the leaders in
many labs."**

Caswall Price,
Boehringer Ingelheim
Pharmaceuticals, Inc.

Because of the pharmaceutical industry's strong research programs, their future should also be very promising. Boehringer Ingelheim Pharmaceuticals is growing rapidly and hiring in all R&D departments at all levels."

At the BS/MS level, these include individuals with backgrounds in information technology, chemistry, biochemistry, biology, genetics, and biotechnology. Price sees especially strong demand for analytical, biophysical, medicinal, and bioanalytical chemists. Individuals now pursuing BS or MS degrees in these fields will have good job prospects for many years ahead, Price said. Students with the foresight to combine life sciences or chemistry with computer sciences can look forward to many opportunities in fields like bioinformatics and genomics.

Price uses his scientific background and extensive training in human resources to evaluate an applicant's knowledge of science. Beyond good basic scientific skills, Price looks for a core of other traits, including good interpersonal and communication skills, ability to work effectively on a team, and leadership skills. Hands-on research experience in industry, a summer internship, or cooperative education program is, of course, always a plus.

Boehringer Ingelheim Pharmaceuticals encourages BS/MS employees to enhance their degrees, offering in-house education programs and 100 percent tuition reimbursement for outside course work. A number of colleges and universities are within an easy commute of the company's own 300-acre campus. Boehringer Ingelheim Pharmaceuticals also prides itself on having so many upper-level scientists who act as mentors to advance the careers of BS/MS researchers.

Barbara Norton-Gill, SAIC Frederick: **"Our Laboratories Need BS/MS Researchers"**



Barbara Norton-Gill

FREDERICK, MD—SAIC Frederick, a division of Science Applications International Corporation and the world's largest employee-owned scientific, technical, and engineering services company, manages the Operations and Technical Support (OTS) contract for the National Cancer Institute's Frederick Cancer Research & Development Center (NCI-FCRDC).

As technical recruiter for SAIC Frederick, Barbara Norton-Gill seeks personnel for what amounts to a thriving biotechnology organization. Its scientists work collaboratively with NCI counterparts on projects ranging from gene analysis at the molecular level to clinical projects on new methods of cancer treatment. Initiatives include cancer and AIDS drug screening programs, AIDS vaccine development, GMP manufacture of biopharmaceuticals, structural biology, and the Frederick Biomedical Supercomputing Center.

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Ph.D. - Senior Molecular Biologist/ Cell Biologist

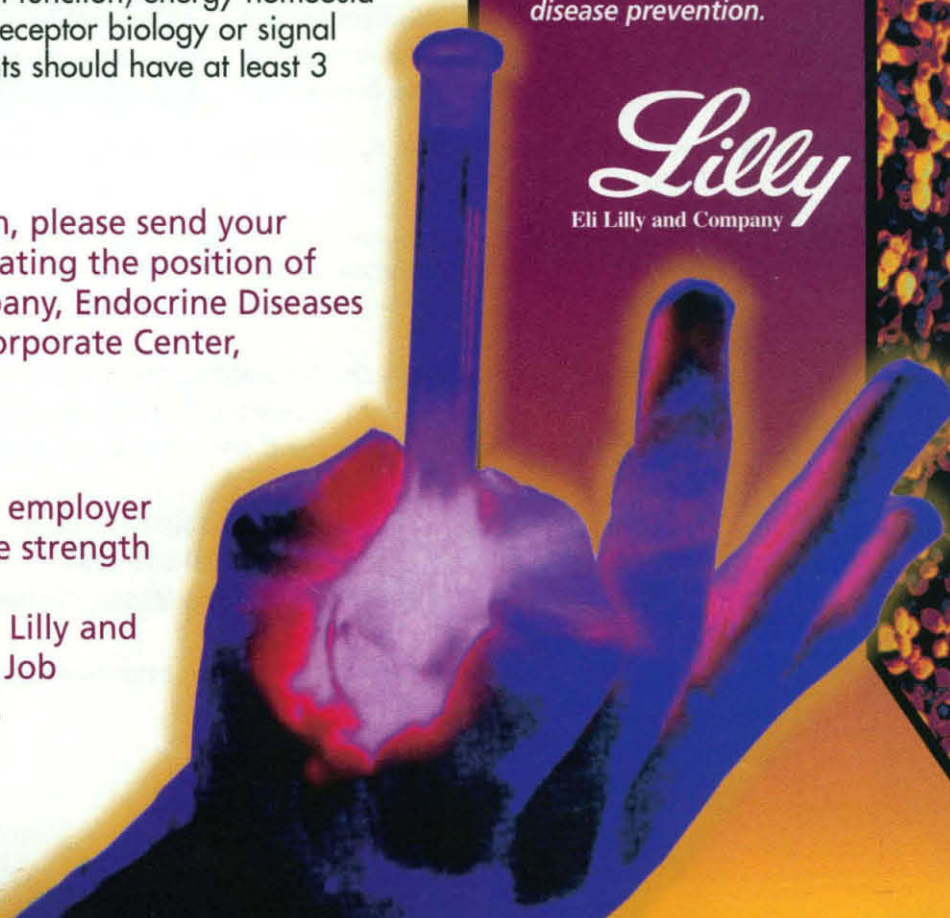
We are seeking senior scientists to expand our effort to profile human gene expression associated with obesity and diabetes. Projects will center around the identification of novel therapeutic targets and proteins that, in their own right, may be therapeutic agents. The successful candidate will have a proven record of accomplishment in obesity or diabetes research. We are particularly interested in scientists with experience in adipocyte differentiation, beta cell function, energy homeostasis, cytokines, insulin resistance, receptor biology or signal transduction pathways. Applicants should have at least 3 years of postdoctoral experience.

For confidential consideration, please send your resume and cover letter indicating the position of interest to: Eli Lilly and Company, Endocrine Diseases ADSCMPH08, DC1818, Lilly Corporate Center, Indianapolis, IN 46285.

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Eli Lilly and Company's Division of Endocrine Research is committed to developing novel drug therapies to effectively treat obesity and diabetes. At Lilly, our delivery of revolutionary pharmaceutical-based health care solutions is inspired and guided by the people we touch. Our commitment to excellence and professional integrity reinforces our passionate pursuit and discovery of mankind's most advanced treatments, cures and methods of disease prevention.

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MOLECULAR BIOLOGY

NEUROSCIENCE

PHARMACOLOGY

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I N N O V A T I O N

... is "priority one" at Millennium.

Our distinctly different approach combines genetics, genomics, and bioinformatics to create a uniquely powerful discovery process designed to make breakthrough therapies available faster for a full range of major under-served diseases. We have recently formed three subsidiaries – Millennium BioTherapeutics, Millennium Predictive Medicine, and Millennium Information, Inc. – to further enhance the discovery process in key specialized areas. We have also partnered with the Monsanto Company to create Cereon Genomics LLC., a company focused on the discovery and development of genomics-based plant and agriculture products. Given the challenges still to be faced, and the breakthroughs still to be discovered, there's no better time than now to bring your spirit of innovation to a company that reflects it, respects it, and rewards it.

RESEARCH ASSOCIATES

Gene Discovery

We have numerous openings throughout Millennium's various discovery organizations. All positions require a BS/MS, at least 3 years of solid experience in the molecular biology field, and experience with techniques such as gene expression technology, DNA cloning, PCR, Southern and Northern blotting, tissue culture, and restriction mapping. Several opening require specialized training in the following techniques: genomic mapping, construction of gene targeting vectors, immunohistochemistry, HPLC, data and image analysis, and the analysis of gene expression.

Chemistry

Several opportunities exist within the Chemistry Department for highly motivated professionals with BS and MS degrees to contribute to many exciting areas of drug discovery. You will be using medicinal and/or combinatorial chemistry techniques to prepare and characterize drug-like compounds for high-throughput screening and hit-to-lead follow up. You must have experience in synthetic organic chemistry in the area of drug discovery. Additionally, experience with high-throughput parallel synthesis methods is preferred. Sound working knowledge of HPLC, MS and NMR techniques are required, as well as good communication skills to interact effectively within an interdisciplinary team. We require a minimum of a BS degree in chemistry with 3+ years of experience, or an MS with 1+ year of experience in synthetic organic chemistry, preferably in a pharmaceutical setting.

Drug Discovery

Work in either our assay development group or our high-throughput screening group to analyze genes that are considered validated targets by our functional genomics group. Qualifications include a BS/MS in cell biology, immunology, or biochemistry, and 2 - 4 years of experience to include work with such techniques as the generation of functional bioassays, ELISA based assays, and tissue culture. You should also have experience running and automating high-throughput discovery screens, including mammalian, enzymatic, and receptor binding assays.

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"Our laboratories need BS/MS researchers," said Norton-Gill, who has 15 years of experience as a scientific/technical recruiter. "They typically carry on much of the day-to-day effort, with guidance from postdocs or senior scientists. There is a wonderful interchange between these levels, with BS/MS personnel providing a fresh and important perspective on research."

BS/MS scientists account for about one third of SAIC Frederick's technical staff and include about 300 individuals with a Bachelor's degree and 140 with a Master's.

Hot career fields at SAIC Frederick include biotechnology and pharmaceutical development, virology and vaccine development, transgenics and gene knockouts, quality control/quality assurance, and scientific computing in a research environment. Norton-Gill said that individuals with backgrounds and skills in computational biology, immunology, and biophysics are in especially short supply right now.

"We look for individuals with a well-rounded science education with good lab experience and sound knowledge of basic techniques," she said. "Our facility often recruits new grads who have little or no work experience. But internships

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students...who
want to move up
into higher posi-
tions in industry,
government, or
academe."**

**C. Robert Matthews
Pennsylvania State
University**

or co-op experience are invaluable pluses, even those involving short-time assignments. They're a true indicator of initiative and motivation. Balance is important, too—self-motivation combined with the ability to take direction."

What might give one applicant an edge when recruiters must pick between two individuals with equivalent scientific skills? Norton-Gill cited communication and presentation skills, and prior research, teaching, or mentoring experience.

Norton-Gill has sound advice for individuals currently in BS/MS programs who want to emerge fully prepared for the biotech marketplace of the future: try to get some hands-on research experience. Enhance your degree program with specialized courses.

"The biotech marketplace will continue to grow and exhibit dynamism. Candidates should be aware that they may be with an individual company for a matter of years, rather than an entire career, especially as more companies merge or enter into joint ventures or other cooperative arrangements. More and more positions will become available on a contractual basis, as well. As candidates transition from one position to another, their skill base and knowledge can only grow."

The Worth of an Advanced Degree: Perspectives from Industry

We've encountered a lot of conjecture over the years about the economic benefit of transitioning from a BS to an MS to a Ph.D. Word on the street is that stepping up to an MS means about \$1 million in additional lifetime earnings, and the long climb to a doctorate fetches at least an additional \$1 million over the course of a career.

Several individuals on our BS/MS panel heard the same figures, but none could cite sources or other authentication. The overwhelming consensus was that financial reward alone is a poor rationale for investing the time and effort required to get a doctorate.

Consider a few excerpts from conversations with our panelists:

Barbara Norton-Gill, SAIC Frederick:

Aside from the personal satisfaction of completing an advanced degree, economic advantages vary from one workplace to another. In the pharmaceutical industry, for example, an MS could very easily translate into a management position. In

an academic or government research environment, an MS may mean moving into a senior technician/laboratory supervisor position. A laboratory head would need a Ph.D. But dollars certainly should not be the deciding influence. Individuals considering an advanced degree should ask if

they want to stay at the bench their entire career, or evolve into a managerial or other role. If they want to stay in research, an advanced degree can mean more flexibility and freedom in picking the kinds of research in which they become involved.

Dean Stults, Novartis Agribusiness Biotechnology Research, Inc.:

An MS usually starts at an annual salary of about \$5,500 more than a BS, and a Ph.D. usually starts at about \$20,000 more. It can vary with the individual, the position, and other circumstances, of course. But BS/MS-level scientists do have good opportunities for career advancement. Beyond the entry-level stage, we put more emphasis on performance of the individual rather than the degree. Degree level certainly does come into play, however, because the MS-level individual usually has more scientific skills and is better prepared to function at a higher level.

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Neurobiology

Investigate CNS disease mechanisms, discover new molecular targets and characterize novel therapeutics for Alzheimer's disease, Parkinson's disease, migraine, schizophrenia, anxiety and depression. These positions require a B.S./M.S. in biological sciences and a neuroscience orientation. **Refer to position #980219**

Infectious Disease Research

Conduct basic and applied research in bacterial, viral and fungal physiology. Participate in the development of mechanism-specific assays for the detection and evaluation of potential drug molecules. These positions require a B.S./M.S. in microbiology, biochemistry, chemistry or a related field. **Refer to position #980375**

Cell & Molecular Biology

Position available for candidate with contemporary molecular and cell biology skills. This position requires a B.S./M.S. in biochemistry, molecular biology or closely related field. **Refer to position #980464**

Genomics

Position for fungal molecular biologist involved in the application of genomic technologies such as microarrays and database mining to discover novel anti-fungal molecular targets. This position requires an M.S. (or equivalent) in molecular biology, microbiology or biochemistry. **Refer to position #980127**

Pharmacology

Conduct in vivo and in vitro efficacy, lead finding and mechanism-of-action studies to identify and develop novel antibacterial agents using a variety of laboratory models. Broad training in applied microbiology is preferred. Responsibilities will include classical microbiological analysis and tests in animal models and bacterial cultures. Candidates should have a B.S./M.S. in microbiology or related discipline. **Refer to position #980574**

High-Throughput Screening Center

Involves development and performance of high-throughput screens to discover novel therapeutic agents. Requires B.S./M.S. degree in biochemistry, cell biology, molecular biology, engineering, or a related science. Candidate must be familiar with biochemical assays, robotic HTS equipment and data analysis/management. **Refer to position #980266**

Protein Science

Work as part of a team to purify and characterize native and recombinant proteins, develop enzyme assays and perform kinetic analyses. Requires a B.S./M.S. in biochemistry, molecular biology or a

closely related field. Knowledge of protein chemistry and experience in cloning and expression of proteins in recombinant organisms desirable. **Refer to position #980589**

Medicinal Chemistry

Assist in the design and conduct the synthesis, purification, and characterization of novel small molecules directed toward the development of therapeutic agents. Candidates should have a B.S./M.S. degree in synthetic organic chemistry, preferably with documented research experience. **Refer to position #980568**

Combinatorial Chemistry

Participate in the design and synthesis of compounds for biological evaluation using combinatorial chemistry techniques to facilitate the drug discovery/development process. Candidates should have a B.S./M.S. in organic chemistry. Experience in synthetic organic chemistry and/or combinatorial chemistry techniques is preferred. **Refer to position #980258**

Protein Purification and Crystallization

Purify and prepare protein samples, and develop crystallization strategies for new protein targets in support of the structure-based drug design program. Candidates should have B.S./M.S. in biochemistry or related field, with a minimum of 2-3 years directly related laboratory experience or equivalent. Experience in protein purification and crystallization of macromolecules is required. **Refer to position #980233**

Analytical Chemistry

Develop capabilities and implement procedures that effectively respond to the analytical needs encountered in drug discovery/development research. Candidates should have a B.S./M.S. degree in analytical or biophysical chemistry and be familiar with workstations and software associated with modern analytical instrumentation. **Refer to position #980261**

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Students receive training through a core curriculum, small seminar courses and access to renowned seminar speakers. You can choose to conduct your thesis research in a laboratory of one of the 72 participating faculty and the 15 new faculty hired in association with the Institute for Cellular and Molecular Biology. Students are primarily supported by graduate research assistantships, which carry a stipend of \$16,500 a year, plus full health benefits and tuition remission.

The cornerstone of the program is the new Institute for Cellular and Molecular Biology, which was established to expand and foster the development of molecular biology at The University of Texas at Austin. The Institute is centered in the new 150,000 sq. ft. Louise and James Robert Moffett Molecular Biology Building (opened fall 1997) with state-of-the-art research laboratories, animal facilities, staffed core facilities for nucleic acid sequencing and synthesis, peptide sequencing and synthesis, flow cytometry, electron and confocal microscopy, molecular modeling, graphics, and computing. It is situated in close proximity to the other science buildings on the UT Austin campus. Nestled in the hill country of Texas, Austin is widely recognized as one of America's most beautiful and livable cities. Come and join us at this exciting time.

For admission information contact:

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Telephone: (512) 471-2150**



Opportunities for postdoctoral positions also exist. Inquiries for these positions should be directed to individual faculty members or to:

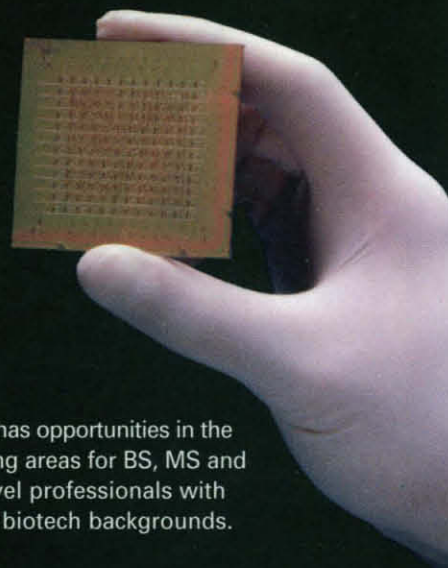
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A complete listing of faculty and their research interests as well as other information on the graduate program can be found at <http://www.esb.utexas.edu/molbio/>.



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O R C H I D B I O . C O M

Penn State's Integrative Biosciences Degree Program:
**New Life Science Degrees Focused
 on the 21st Century Job Market**



C. Robert Matthews

UNIVERSITY PARK, PA—Several years ago, faculty at the Pennsylvania State University realized the need for a new life science graduate degree program shaped to respond to the ever-changing realities of the academic and in-

dustry job marketplace. Among the dreams for what became known as the Integrative Biosciences Graduate Program:

Produce graduates at the MS and Ph.D. levels who are more employable in both academic and industry settings. The graduates would be exposed to a variety of careers in the life sciences; get plenty of real-world experience through internships in many different kinds of workplaces; master teamwork skills, which are so valued in the biopharmaceutical industry; be sure-footed enough to cope in 21st-century science, when many scientists may transition through several careers in a lifetime; and be adept at working on the cutting edge of discovery, the fringes where traditional disciplines overlap.

The Integrative Bioscience Degree program is delivering on those and many other expectations, according to C. Robert Matthews, professor of chemistry and Eberly Family professor in biotechnology at Penn State's main campus here. Matthews is director of graduate education for programs on the PSU University Park Campus. Judith Bond, professor and chair of biochemistry and molecular biology, is director of PSU's Medical Center campus in Hershey, Pennsylvania. Both codirect graduate education for Penn State's Life Science Consortium.

More than 200 faculty members from 26 departments in six colleges on the University Park and Hershey Medical Center campuses now are members of the Integrative Biosciences Graduate Program. Drawn from the sciences, engineering, liberal arts, and other fields, they are part of a university-wide effort, the Life Science Consortium, working to promote research at the interfaces between traditional life sciences disciplines and develop new approaches to education.

Nina Fedoroff, Willaman Chair of life sciences and director of the Biotechnology Institute, piloted the new degree program into existence late in 1996, when its nine initial students enrolled. Matthews said the program eventually will accept about 40 students each year.

"Integrative Biosciences has a lot to offer students with BS or MS degrees who want to advance in their careers and move up into higher positions in industry, government, or academe," Matthews said. The transition from BS/MS to Ph.D. requires tremendous commitment in terms of time and effort, Matthews noted. But it is

**"We're placing
 more emphasis,
 particularly
 at the Bachelor's
 and Master's levels,
 to train people
 for the
 marketplace."**

Neal J. Smatresk,
 University of Texas
 at Arlington

the key to jobs like research director, in which an individual has greater flexibility and freedom to design and run a research program.

Students can choose from nine degree options: biomolecular transport dynamics, cell and developmental biology, cellular and molecular mechanisms of toxicity, chemical biology, ecological and molecular plant physiology, immunobiology, molecular medicine, neuroscience, and nutrition sciences.

"The program incorporates a number of innovations," Matthews noted. "One that is still rare at the Ph.D. level is the opportunity to do an external internship in an industrial, professional, or governmental setting. Most often, it will be in a biotech or pharmaceutical company. However, nontraditional settings such as regulatory agencies, law, science writing, and investment are possible. It gives students first-hand experience, a chance to try different careers, and professional

contacts that can be important in obtaining a job."

It is an excellent choice, Matthews added, for BS/MS scientists considering careers away from the lab bench, in the business side of the biopharma industry: science writing, government, and law.

Lewis Siegel, Duke University: **"Unlimited Opportunities for
 MS and Ph.D. Students in the Biological Sciences"**



Lewis Siegel

DURHAM, NC—Located in the lush, rolling piedmont near the geographic heart of North Carolina, Duke University beckons individuals with visions of graduate study in a multitude of ways.

There's the natural beauty of its campus and an eminently livable town of 147,000 that forms one of three city hubs (with Chapel Hill and Raleigh) in "The Triangle."

This hotbed of biotech and high-tech enterprise forms a metropolitan area of about one million with educational and cultural opportunities galore.

Duke's academic vistas in the life sciences are just as appealing. "We want to make it clear to students that their opportunities are wide open here," said Lewis Siegel, dean of the graduate school and vice provost. "Students can be admitted to any of a dozen graduate programs and get degrees in a dozen different fields in the biological sciences. There are departmental degree programs, true interdepartmental and interdisciplinary programs, and certificate and enrichment programs.

The possibilities include some of the hottest career fields in the biopharma industry: biochemistry, biological chemistry, cell biology, cellular and biosurface engineering, chemistry, genetics, immunology, integrative biology, microbiology, molecular biophysics, molecular cancer biology, neurobiology, pathology, pharmacology, and toxicology.



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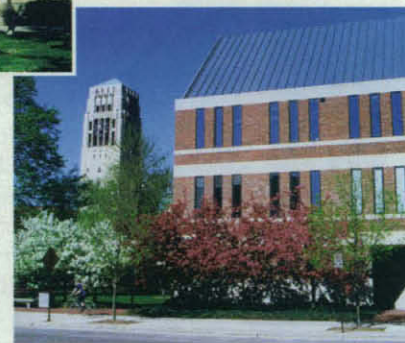
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Photos: scenes from the campus in Ann Arbor, Michigan.

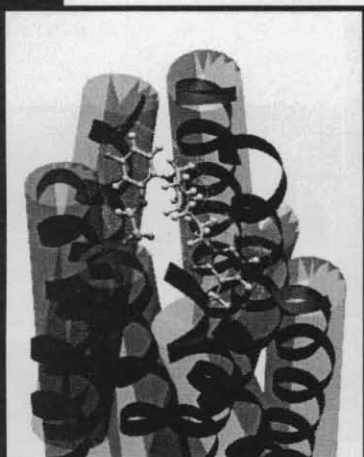


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ing knowledge of protein purification and crystallization, X-ray diffraction data collection, and X-ray structure determination techniques, plus experience with UNIX and SGI computers required. Job Code: SCI0814-KHA

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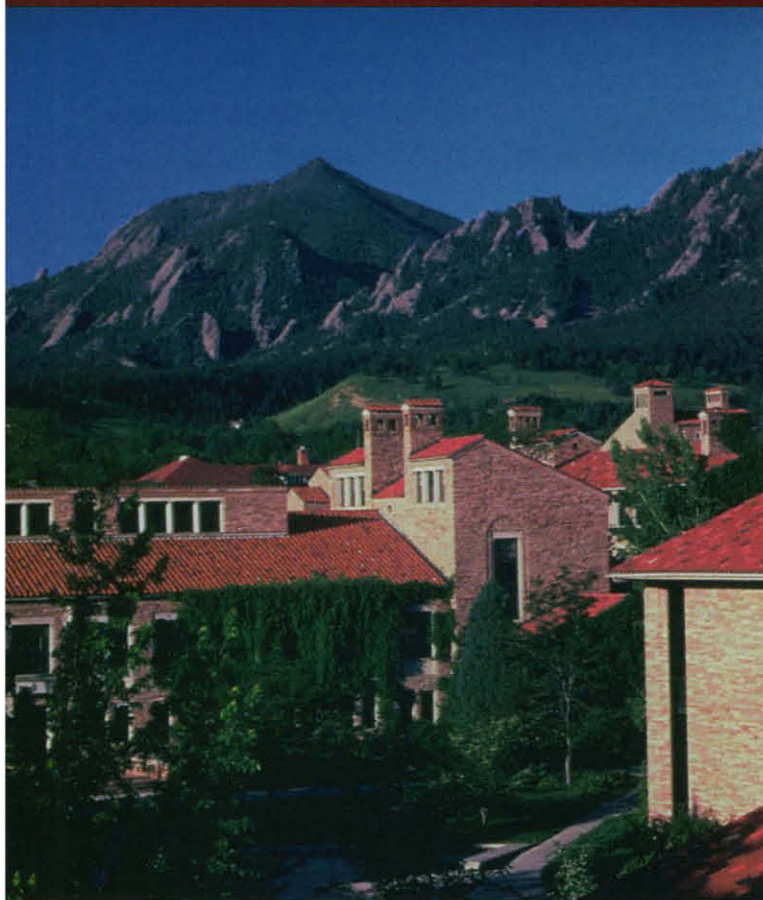
Chemical Development

You will conduct and report research to solve synthetic organic chemical problems of routine and moderate complexity related to process development and scale-up. You will also participate in the production of batches of drug substances needed for proof of concept studies and/or parallel activities related to drug development. This will include performing laboratory-scale experiments to find and improve new, efficient, economical and safe synthetic routes to target molecules. A BS/MS in Chemistry with 5+ years of relevant experience is required. Familiarity with TLC, HPLC, IR, NMR, and MS techniques and proficiency with literature searching would be a plus. Job Code: SCI0814-KHB

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The Worth of an Advanced Degree: Perspectives from Academe

What are the economic benefits of enhancing that degree? Observations from our panel of academic experts:

Lewis Siegel, Duke University: Economic advantages of a Ph.D.? I'm not sure there are any. The vast majority of our students pursue a Ph.D. because they want a full research career in academia or industry. They realize that a Ph.D. is essential in that role. Often, a postdoc also is essential. When you factor in the years of low pay during a postdoc, and all the effort, it becomes very difficult to justify getting a Ph.D. for financial reward alone.

Susan Huntington, Ohio State University: I've never seen data on the \$1 million figure, but it is something I've heard. When you look at the degree of effort required for a Ph.D., it is probably larger than the Bachelor's and Master's degree combined. It is a very significant investment of time for the student and the institution. I would never recommend that somebody get a Ph.D. simply because of the likelihood that they might earn more over their lifetime. A Ph.D. is the key to a different life in a different career, a research career.

Many of Duke's graduate programs offer a core curriculum with a menu of short courses that provide broad exposure to experimental biology, and preparation for a range of disciplines. Duke graduate students usually have an opportunity to rotate through different labs and sample new research fields. As a result, about one in four students gets hooked on a new field of research substantially different from their original area of interest.

One that has lured a number of students is Duke's Ph.D. in molecular cancer biology, which was introduced four years ago. Siegel also is excited about interdisciplinary programs that allow students to bridge medicine and other fields, such as engineering, while being formally associated with either department. Siegel cited the Ph.D. in cellular and biosurface engineering, for instance, in which students focus on the microtubule scaffolding inside cells, critical events at the cell surface, and other cellular effects with health implications. Duke also is developing a true molecular medicine Ph.D. program that Siegel envisions as a natural evolution of the traditional pathology doctorate.

What does Duke look for in applicants, aside from a good academic background?

"The most important characteristic is evidence of research experience," Siegel said. "It outweighs almost every other factor. Obviously, it is a tremendous plus if an applicant has research experience and has published results. We look for real knowledge about the nature of research, intellectual openness to a variety of research possibilities, and a lot of enthusiasm about science."

Siegel encourages BS/MS-level scientists now in the biopharmaceutical industry to consider enhancing their degrees. With research experience from their careers to date, most would be prime candidates for an advanced degree.

Neal J. Smatresk, University of Texas at Arlington: "More Emphasis on Training Students for the Marketplace"



Neal J. Smatresk

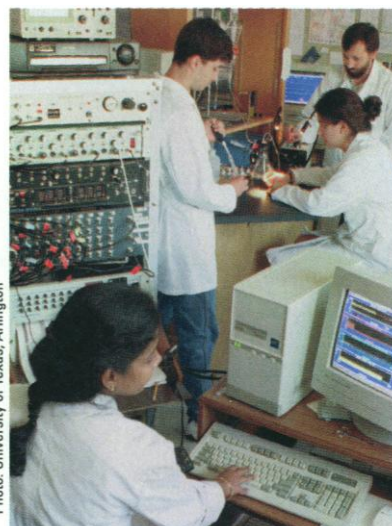
ARLINGTON, TX—Welcome to the "Metroplex," a vibrant region of North Texas stretching between the cultural, economic, and industrial powerhouses of Fort Worth and Dallas. Arlington and its University of Texas campus sit midway between the hub cities, and within easy reach of everything from world-class symphonies to cowboy rodeos.

"This is a thriving metropolitan region," said Neal J. Smatresk, new dean of the University of Texas at Arlington (UTA) college of science. "We have a large and growing biopharmaceutical industry and many other biomedical-related employers. There's a great demand for people with technical training. We're placing more emphasis, particularly at the Bachelor's and Master's levels, on training people for the marketplace."

Gone, for instance, is the traditional perspective on the Master's degree, once considered mainly a preamble to the Ph.D. for students destined for careers in academe. UTA is trying to broaden its strong traditional programs in biology with BS and MS programs that include more skills important for the industrial career path.

"We're finding that more and more applicants want a Master's degree in order to gain the scientific skills they need to work in industry settings," Smatresk noted. "These may be mature students who already have spent time in industry. Some may want to enhance their skills in their current field. Others are reassessing their careers and want to prepare for work in related areas."

In some instances, students are trying to decide between an industry and academic career. UTA programs provide contact with both worlds. Students can receive strong traditional training through the Ph.D., or may choose hands-on exposure to laboratory research in Metroplex industries, so they can make more informed decisions between industry and academe.



University of Texas at Arlington students develop new laboratory skills on modern instrumentation while enhancing their degrees.



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SCIENTIST—MOLECULAR BIOLOGY (job # 500-TS-7/98-0014)

PRIMARY RESPONSIBILITIES

The selected individual will perform molecular biology studies on novel receptors to assist in the discovery of small molecules that modulate these receptors. This individual is expected to have extensive experience with the application of molecular biology techniques to the study of receptor proteins; and will be responsible for the implementation of project strategies that require these techniques. A strong background in experimental design and data interpretation is required; as is a current knowledge of the relevant scientific literature and emerging molecular biology techniques. The individual will effectively participate as a member of a multidisciplinary project team and is expected to work independently while helping supervise other team members.

SPECIFIC DUTIES

- Carry out cloning strategies to isolate cDNAs encoding human receptors and prepare DNA constructs that encode chimeric receptor proteins.
- Characterize orphan receptors and their signal transduction properties, as well as identify their physiological ligands.
- Prepare synthetic cRNAs from DNA constructs for *Xenopus* oocyte studies.
- Transiently and stably transfect mammalian cells with DNA constructs.
- Conduct preliminary characterizations of novel cell lines by utilizing western blot analysis and second messenger assays.
- Serve as a technical expert to provide guidance and training on utilization of molecular biology techniques.
- Perform experimental design, data analysis and data interpretation, as well as prepare and communicate technical reports and scientific publications.

JOB QUALIFICATIONS

- Ph.D. in Molecular Biology or relevant discipline with at least 4 years experience
- Extensive experience with basic molecular biology techniques including cDNA and genomic library construction, cDNA cloning, PCR, *in vitro* transcription, other relevant nucleic acid manipulations, as well as familiarity with DNA transfection techniques and mammalian tissue culture, and relevant computer skills
- Previous experience with project management and supervision of other molecular biologists.

RESEARCH ASSOCIATE—PHARMACOLOGY (job # 500-LH-7/98-0012)

PRIMARY RESPONSIBILITIES

The selected individual will contribute to a multidisciplinary team that is focused on drug discovery. This individual will utilize his/her skills to perform functional assays for the pharmacological characterization of compounds active on G protein-coupled receptors (GPCRs).

SPECIFIC DUTIES

- Perform studies aimed at characterizing the pharmacological effects of compounds that modulate GPCRs. This characterization will include the use of functional assays of GPCRs for drug discovery in both native and recombinant systems.
- Make detailed observations, analyze data, and interpret results.
- Productively interact with pharmacologists, molecular biologists, and chemists, and may provide technical guidance to other team members.

JOB QUALIFICATIONS

- B.S. with a minimum of 5 years relevant experience in Pharmacology, Biochemistry, or related fields
- Demonstrated success in working within a team environment
- Expertise in receptor pharmacology and signal transduction assay methods is preferred



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months prior to starting the fellowship and intend to apply to graduate or medical school within the next year. Awards may be granted for an initial 12-month period and be renewed one time for an additional 12 months, based on satisfactory progress towards matriculation at an accredited graduate or medical school. Upon acceptance to graduate or medical school, you may be eligible for additional NIH training programs.

The experiences you gain at the NIH in this program will be valuable wherever your career takes you. Interested candidates should submit a *curriculum vitae*, three letters of recommendation emphasizing your research potential, a statement of your research interests and an official copy of your college transcript to the Coordinator of Student Programs, NIH Office of Education. To be eligible, candidates must be U.S. citizens or permanent residents.



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UTA also is responding to marketplace needs with an innovative doctoral degree in applied chemistry and biochemistry. The degree requirements include all the rigorous graduate-level course work in chemical disciplines, along with an original faculty-supervised research project and a dissertation.

The degree program differs, Smatresk explained, in adding courses and requirements that give students a working knowledge of industrial research practices and methodologies. Included are courses in industrial chemistry, unit operations, economic analysis, and patents and regulatory affairs. In addition, students must perform a one-semester research internship in an industry or government lab. The internship not only helps students better define their career goals, it also provides invaluable experience that can give UTA graduates an edge when applying for jobs.

"Universities all over the country are reevaluating how they train Ph.D's," Smatresk noted. "The tendency has been for academia to train new Ph.D's in their own image, as scientists interested in basic research. While our core programs are built on a foundation of strong basic research training, the explosion of excellent bioscience jobs in industry challenges us to change our training paradigms, and produce students with skills that better fit the need. An adaptive, aggressive graduate program that targets people for the marketplace can really be a boon to students and employers."

He foresees more crossover training at the doctorate level, combining business engineering with traditional course work.

Timing Those Critical Degree Enhancements: **Perspectives from Susan Huntington, Ohio State University**



Susan Huntington

COLUMBUS, OH—With the biopharmaceutical job market sizzling for scientists at the BS/MS level, and career opportunities galore beckoning with great starting salaries and benefit packages, new graduates are having a tougher time than ever in deciding when to enhance their degrees.

Should individuals with a BS stay on in academe and get an advanced degree immediately? Or would they

do better to grab that job offer in industry now and think about an MS or Ph.D. later? We asked for advice in a chat with Susan Huntington, vice provost and dean of the graduate school at Ohio State University:

A lot of personal factors can enter into a decision on when to get an advanced degree. In general, I would probably recommend that a student go directly on to the MS, and make a decision later on whether to go for the Ph.D. A Master's degree represents a tremendous enhancement over a Bachelor's degree. Most Bachelor's degrees emphasize a lot of general education and are limited as the basis of a career, no matter how demanding the specific major might be. A student really has to go on to the next level in order to get a sense of whether he or she wants to stay in a field.

Entering a Master's program right after undergraduate school really does not represent such a big investment in time or resources

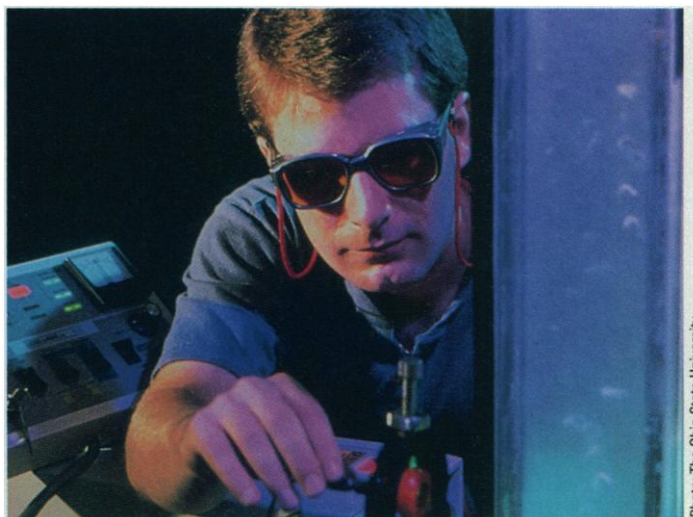


Photo: The Ohio State University

Graduate student working in the physics laser lab.

that it could lead to a disastrous mistake. An MS will expose the individual to advanced courses, concepts, and research, providing a real sense of what a career in that field involves. It also will make the individual much more competitive in the job market.

I know that the economy is very strong these days and a lot of students are being offered wonderful jobs at the BS level right after graduation. That's the other face of the "now-or-later" question for individuals with a BS. Many job offers at the BS and MS level include full tuition reimbursement for advanced courses, although not necessarily right away, and that's an awfully good deal. It's nice to get valuable new skills and have somebody else pay the bills. An industry research job at the BS level also can be an effective way to sample a field, and see if it has the allure for a lifelong career and an advanced degree. Industry experience also can give you a distinct edge when applying to a graduate school. At OSU, we get about 20,000 applications to the graduate school each year. For the life sciences and health sciences programs, industry experience is a definite plus.

Potential applicants also should be aware that graduate education in the life sciences is changing. We're becoming more conscious of the fact that an advanced degree should help the student prepare for their life career choice. That's much different than in past decades, when course content alone was emphasized. Graduate schools are trying to provide more opportunities and skills to prepare students for a career, such as the chance to present at scientific meetings and other professional experiences. We're emphasizing other kinds of professional experience, as well. We encourage students, for example, to spend time in industry labs, getting hands-on experience in a team setting.

Our panel has given scientists with BS/MS degrees every reason for optimism about a rewarding career in the biopharmaceutical industry. Jobs are plentiful and on the very cutting edge of industry innovation. Panelists also had plenty of good insights on enhancing those degrees, and stepping into new career fields. It's a great time to have BS/MS degrees and such wide open career options. ■

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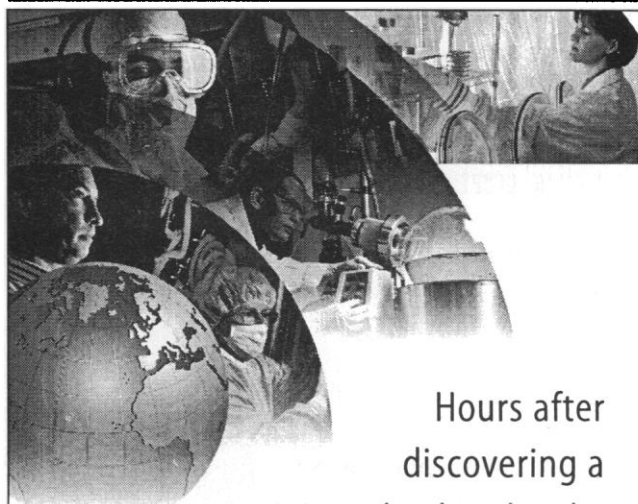
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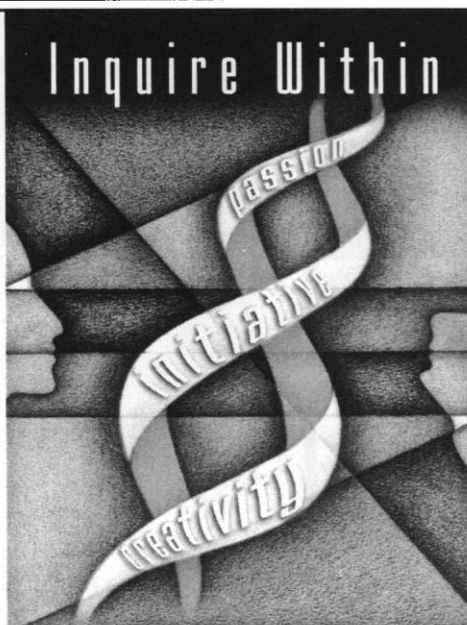
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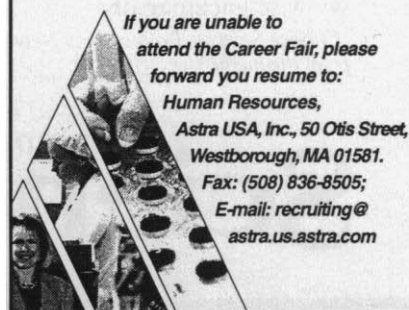
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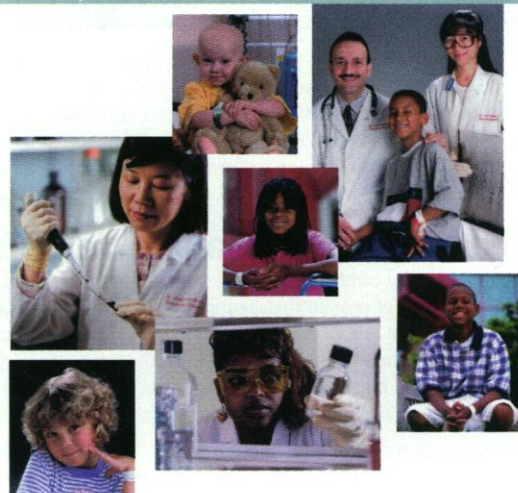
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QUALIFICATIONS: Specific course work in the field of study and directly related professional experience is required. For the chemist, pharmacologist, toxicologist and micro/biologist positions, a doctorate degree in the discipline and experience in the research, development and manufacture of pharmaceuticals are highly desired. Applicants for Consumer Safety Officer positions must have a degree or course work that includes at least 30 semester hours in one or a combination of: biological sciences, chemistry, pharmacy, physical sciences, food technology, nutrition, medical science, engineering, epidemiology, veterinary medical science, or related scientific fields that provide knowledge directly related to Consumer Safety Officer work. Candidates for Civil Service or Commissioned Corps appointments must be U.S. citizens. Candidates for Staff Fellowships may be either U.S. citizens or U.S. permanent residents. Graduates of foreign colleges/universities must show proof of U.S. education equivalency certification.

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SALARY: Civil Service salary range for GS-11 through GS-13 is \$39,270 to \$72,758, plus an excellent benefits package and flexible work schedule. Salary, benefits and level of responsibility are commensurate with education and experience. Positions may also be filled by appointment in the U.S. Public Health Service, Commissioned Corps with commensurate salary and benefits.

HOW TO APPLY: Submit curriculum vitae to:

**DHHS/Food and Drug Administration
7520 Standish Place, MPN1, Room 225, HFD-64
Rockville, Maryland 20855
Attn: Recruitment Staff (SRC 98100)**



MYRIAD GENETICS, INC.

Myriad Genetics has established itself as a leader in the discovery of human disease genes by using a powerful combination of positional cloning techniques integrated with the foremost informatics and high-throughput sequencing capabilities. Our scientific achievements include the discovery of the BRCA1, BRCA2 and MMAC1 cancer genes and the CHD1 coronary heart disease gene. We currently have major programs in asthma, cancer, several central nervous system disorders, coronary heart disease, diabetes, obesity, and osteoporosis. To expand our efforts in novel gene and drug target identification, Myriad Genetics has recently launched the ProNet™ program.

Myriad's ProNet™ program provides researchers a comprehensive map of protein-protein interactions that is an invaluable tool for the elucidation of pathogenic pathways leading to human diseases. This ambitious project involves the application of various automation technologies to the discovery of these interactions. Expansion of our ProNet™ gene identification and characterization efforts provides a number of exciting opportunities for highly motivated individuals.

Research Scientists

Characterization of novel genes and proteins involved in human disease

We seek several motivated and creative scientists to investigate the functional significance of the novel genes identified through ProNet™. Expertise in fields such as mRNA quantification, cDNA synthesis, or protein expression and purification is desired. Additionally, interest and knowledge of human diseases is a distinct advantage. A Ph.D. in the biological sciences and 2 or more years of relevant postdoctoral experience is required.

Group Leader

High throughput discovery of protein-protein interactions

We seek an industrious scientist to manage the automated process of discovering protein-protein interactions. Experience with the two-hybrid system is preferred. Candidates should have a Ph.D. in molecular biology or genetics, and be familiar with lab automation, robotic systems, and database handling. Excellent communication, organizational, and management skills are essential.

Scientific Curators

Development of a comprehensive database of protein-protein interactions

Openings are available for Ph.D. scientists to contribute to a complex database that links published biological information with Myriad's proprietary ProNet™ database. These positions require laboratory experience in the yeast two-hybrid system and the ability to critically evaluate scientific literature. Individuals with a strong eye for detail are encouraged to apply. The positions are full-time but the hours can be flexible. Relocation may not be required as work can be performed via the internet.

We offer an attractive compensation package and a stimulating, interactive research environment. Please mail or fax your letter of interest and include a complete resume and the names of three professional references to: Human Resources Department, Attn: PNJS-104, Myriad Genetics, Inc., 320 Wakara Way, Salt Lake City, UT 84108; Fax: 801-584-3640.

We are an equal opportunity employer. To learn more about Myriad Genetics, visit our web page at <http://www.myriad.com/>

Research & Development Positions

Desmos is a privately held company developing innovative products to treat human disease using proprietary cell adhesion and tissue engineering technology. The Company has 30 employees and is concentrating on developing bio coatings for medical devices as well as treatments for diseases such as diabetes and periodontal disease using extracellular matrix proteins. Desmos has a well-equipped facility located in the heart of the La Jolla scientific community in San Diego, CA. The following position is available for a highly motivated individual with a proven track record of success.

RESEARCH SCIENTIST

As a member of the bio coatings group, the successful applicant will develop novel technologies to improve the biocompatibility of implantable medical devices. Responsibilities include conducting independent research in cell-matrix interactions and designing experiments and assays to demonstrate proof of principle for a new widely applicable technology with the goal to develop new product concepts. Cell Biology training with 2-4 years of postdoctoral research experience is required. Demonstrated expertise in cell-surface interaction and a strong interest in applied research are preferred.

Desmos is a dynamic company focusing on exciting new research. We offer outstanding opportunities for career growth, along with excellent compensation and benefits packages. Please send curriculum vitae by September 30, 1998 to: Desmos, Inc., Attn: Job Code: 602, 3550 General Atomics Ct. #2-503, San Diego, CA 92121. FAX: (619) 455-3962. EOE



MOLECULAR BIOLOGIST/ ASSAY DEVELOPMENT

Third Wave Technologies, Inc., a fast growing biotechnology company, is expanding and recruiting for associate to senior-level scientist positions.

Applicants should have a B.S. to Ph.D. in molecular biology, medical microbiology, biochemistry, or a related field, as well as 0-10 years of experience developing DNA/RNA probe assays for the detection of genetic mutations, SNPs, gene expression, and infectious diseases. Candidates should have a demonstrated knowledge of all aspects of nucleic acid hybridization and amplification technologies.

Third Wave offers an attractive benefits and relocation package including stock options. If you are interested in an opportunity to move to Madison, Wisconsin, America's #1 rated city, and join the Third Wave team, send your résumé to:

Third Wave Technologies, Inc.

Attn: Human Resources SC-1

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Sales in 1997 were \$5.65 billion worldwide. ▲

As one of five R&D companies within the Astra Group, Astra Arcus is focused on the discovery and development of drugs for the treatment of central nervous system diseases. To further expand our research activities, we are building a Boston-based, state-of-the-art research center for 250 staff to be completed in 2001. *In the interim, we are able to offer several exciting opportunities within the Molecular Sciences Department to work at our newly-renovated facility at the Massachusetts Biotechnology Park in Worcester.* These are exceptional opportunities for ambitious scientists who aspire to work with advanced technologies in a multidisciplinary environment. ▲

We offer a highly competitive compensation/benefits plan and managed relocation assistance. Please specify position and forward your resume, including salary history and references to:

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Worcester, MA 01605
e-mail: jobs@arcus.us.astra.com

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Proteomics

Senior Scientist

In this senior level role, the successful candidate will utilize his/her proven skills to establish a state-of-the-art capability in proteomics that will be applied broadly across drug discovery programs in acute and chronic neurodegenerative diseases and psychiatric disorders. This is a stimulating scientific growth opportunity focusing on the identification and further investigation of novel therapeutic targets, supported by access to Astra's Bioinformatics network, proprietary databases and all appropriate instrumentation.

The qualified candidates will have a Ph.D. in Protein Biochemistry, Analytical Biochemistry or a closely related field, and a minimum of 3-5 years of postdoctoral experience in mass spectrometry of polypeptides (particularly MALDI-TOF, ESI, ion-trap or other tandem-MS methods), familiarity with computerized search algorithms employing public and proprietary databases for analysis of mass data, and experience in one or more other analytical and preparative techniques such as two-dimensional gel electrophoresis, capillary electrophoresis, HPLC, plasmon surface resonance, and/or other amino acid composition and sequencing methods.

Excellent organizational, strategic and interpersonal skills are required, along with a demonstrated ability to work effectively in a highly collaborative team-oriented environment. The establishment of a highly visible professional profile will be encouraged through publication and participation in scientific meetings.

Research Associate

Reporting to the Senior Scientist, Proteomics, the successful candidate will be responsible for supporting the development of the proteomics efforts described above. The qualified candidate will have a B.Sc./B.A. or M.Sc. in protein biochemistry, analytical biochemistry or a related field, and a minimum of 2 years of hands-on experience in one or more analytical techniques for protein characterization such as two-dimensional gel electrophoresis, HPLC, capillary electrophoresis, and primary structural characterization methods such as mass spectrometry, amino acid sequencing and composition analysis. This position also requires excellent organizational and interpersonal skills and the ability to work effectively in a collaborative team-oriented environment.

Assay Development, Enzymology & Protein Purification

Senior Scientist

We are seeking to fill 2 senior level leadership positions in enzymology and protein biochemistry to broaden our existing scope of drug discovery efforts in **Alzheimer's disease**. The successful candidates will utilize and expand their demonstrated skills to participate in efforts directed toward the development and validation of screening assays for selected proteases, kinases, and related biochemical targets, along with their isolation, purification and kinetic characterization.

The qualified candidates will have a Ph.D. in protein biochemistry or a closely related field, and a minimum of 3-5 years of appropriate postdoctoral experience. Excellent organizational and interpersonal skills are required, along with a demonstrated ability to work effectively in a highly collaborative team-oriented environment. A background in Alzheimer's disease research is preferred but not required.

This is an outstanding opportunity for highly motivated individuals wishing to advance their careers in a stimulating area of investigation, with the support of abundant state-of-the-art technical resources. The establishment of highly visible professional profiles will be encouraged through publication and participation in scientific meetings.

Research Associate

Reporting to the Senior Scientist, the successful candidate will be responsible for supporting the development of screening assays, as well as the isolation, purification and kinetic characterization of the selected targets described above. The qualified candidates will have a B.Sc./B.A. or M.Sc. in protein biochemistry or a closely related field, and a minimum of 2 years of hands-on experience in immunoassay development, in addition to one or more of these technical areas. This position also requires excellent organizational and interpersonal skills, and the ability to work effectively in a collaborative team-oriented environment.

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Corning Science Products is a division of Corning Incorporated, a \$4 billion, Fortune 500 diversified product company with a strong tradition of technological innovation. The Science Products Division develops high technology research tools used for drug discovery and functional genomics, as well as for other exciting life science areas. We are seeking talented individuals to join our suburban Boston office in the following areas:

Sr. Molecular Biology Development Scientist

We are seeking world-class individuals to perform innovative product research and development using new and emerging technologies in various life science areas including molecular biology and functional genomics. Individuals will develop high technology research tools as part of a fast-moving team of molecular biologists, chemists, materials scientists, and engineers.

Qualified candidates will possess a Ph.D. in Biological Sciences with publications in top-tier journals such as *Science*, *Cell*, and *Nature*. **Job Code: DS**

Manager, Applications and Business Development

This person will be responsible for developing and implementing the business development strategy for products that will be used to expedite the drug discovery process. Additional responsibilities include managing our applications development group; helping to evaluate, select, and manage technical partners, alliances, and key suppliers of biological components and beta test sites; as well as providing customer applications support following initial product launches.

Qualified candidates will possess a Ph.D. in Biological Sciences with 5–10 years of experience in Cell and Molecular Biology techniques. Previous experience in product and applications development is preferred. **Job Code: MBD**

Corning offers a competitive compensation and benefits package. Some of the benefits include 401(k) with company match, defined pension plan, stock purchase plan, health and dependent care flexible spending accounts, and tuition reimbursement.

Please mail or fax your résumé including Job Code along with your salary requirements to:

Human Resources Department, Corning Incorporated, Science Products Division, 45 Nagog Park, Acton, MA 01720, Facsimile # 978.635.2481, www.scienceproducts.corning.com
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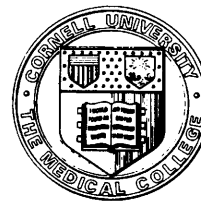
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DEPARTMENT OF CELL BIOLOGY

The Weill Medical College of Cornell University, formerly the Cornell University Medical College, seeks a distinguished scientist for appointments as Professor and Chair, Department of Cell Biology, Weill Medical College of Cornell University. Candidates must present evidence of outstanding accomplishment in research, commitment to the educational mission of the Medical College and capability as an administrator.

Send a current curriculum vitae, which includes a list of publications to: **Richard D. Granstein, M.D., Chair, Cell Biology Search Committee, Room 342, Weill Medical College of Cornell University, 1300 York Avenue, New York, NY 10021.** You may also send an e-mail at chair-search@mail.med.cornell.edu. For more information you may visit our webpage at <http://www.med.cornell.edu/chair-search>.

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POSTDOCTORAL ASSOCIATE

A postdoctoral research position is available to join a program in Functional Genomics. Specifically, the project will focus on the development of laboratory methods for DNA microarray-based gene expression profiling. Particular emphasis will be placed on extracting clinically and biologically important information from gene expression profiling, with a special emphasis on cancer. The project will involve close interaction with computer scientists developing analytical methods for elucidating gene function from gene expression data. Requires a Ph.D. or M.D., experience in molecular genetics, and strong analytical skills.

We offer excellent salaries, generous benefits, interaction with MIT community, opportunity to attend scientific lectures, state-of-the-art research facilities, and a convenient location. Please send CV or resume to: Whitehead Institute/Center for Genome Research, Dr. Todd Golub, Research Scientist, Ref. SCI:814, 1 Kendall Square, Bldg 300, Cambridge, MA 02142.

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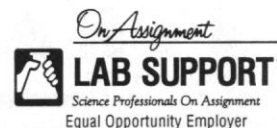
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NEW INITIATIVES IN BIOLOGY AT THE UNIVERSITY OF WISCONSIN-MADISON

The University of Wisconsin-Madison is seeking applications for 15 new tenure-track faculty positions in the Biological Sciences. These faculty will join interdepartmental groups representing four exciting interdisciplinary areas in the Biological Sciences encompassing such diverse disciplines as genomics, developmental neurobiology, photochemistry, biophysics, functional brain imaging, and cognitive neuroscience. Interactions in research and teaching among faculty in each of the groups will be encouraged. Candidates at the assistant, associate, or full professor level will be considered. Candidates should demonstrate the ability to conduct a vigorous research program and participate in appropriate teaching. Applications for the relevant faculty cluster should be submitted to the offices listed below by November 1, 1998.

Genomics

A Genome Center is being established at Madison as a center of excellence in the study of genomes as a whole. The center will participate in national efforts to determine the sequence of model eukaryotes and microorganisms as well as the functional analysis and comparative interpretation of whole genome sequences. Tenure-track faculty will hold joint appointments in relevant academic departments including those in physical, biological, computational, and engineering sciences. Appointments may be assistant, associate, or full professor level. The institute seeks faculty with research specialization in the following areas:

Genome sequence determination and mapping with expertise in the biology of a targeted model organism.

Functional genomics, including parallel strategies for interpreting the biochemical function, 3D structure, and/or biological role of unknown genes found in genome data.

Comparative evolutionary genomics with stress on whole genome analyses.

Bioinformatics, including the interpretation, analysis, and distribution of information on genomes being sequenced at Wisconsin.

Applications must include a CV and a one-page statement relating your research and teaching interests to the points above. Applications may include up to 5 reprints, up to 5 letters of reference, and any other (brief) information you wish to provide. Specific inquiries about the Genomics initiative may be e-mailed to fred@genetics.wisc.edu. Send applications to: **Professor Frederick R. Blattner, c/o Mary Ringelstetter, UW Biotechnology Center, 425 Henry Mall, Room 1132 Madison, WI 53706.**

Biophotonics

The techniques of photon-based experimental manipulation and advanced imaging of live tissues define the field of biophotonics. This field straddles the disciplines of biology, chemistry, and physics. The University of Wisconsin is proposing to hire an interdisciplinary group of three new faculty from diverse backgrounds, but with a common, unifying interest: to develop and apply new optical-based techniques for biological research. We seek candidates in the following areas:

A physicist with a strong track record in the application of optical techniques for biological research. This person would be based in the Physics Department but would have strong collaborations with several biology departments including the Integrated Microscopy Resource. Possible areas could be in non-linear optics, molecular spectroscopy, or new methods of microscopy with potential biological applications, such as X-ray or photoelectron microscopy.

A photochemist/molecular biologist based in the Physiology, Chemistry, Pharmacy, or Biochemistry Departments. This person could be developing new optical probes (possibly based on naturally fluorescent proteins) or new techniques for functional imaging of cells and tissues or new experimental tools based on caged molecules.

A biophysics-oriented cell biologist based in the Molecular Biology Laboratory (with a faculty home in the Genetics, Zoology, or Anatomy Departments). Such a person would be using quantitative optical techniques for the study of functional aspects of the cell. Alternatively, this person could be a biophysics-oriented neurobiologist based in the Physiology or Anatomy Departments.

Applications, including a CV and a brief research proposal, should be addressed to **Pat Hansen, Laboratory of Molecular Biology, 1525 Linden Drive, Madison, WI 53706.** Specific inquiries about the Biophotonics initiative may be e-mailed to **John White** at jwhite1@facstaff.wisc.edu.

Functional Brain Imaging and Affective and Cognitive Neuroscience

With partial support from the W. M. Keck Foundation, the University is creating the W. M. Keck Laboratory for Functional Brain Imaging and Behavior, focused on affective and cognitive neuroscience. The laboratory will include a new 3T MRI scanner, PET scanner, and associated radiochemistry and image processing areas. In conjunction with this laboratory, several interdisciplinary faculty appointments will be made, with the tenure homes of the successful candidates in one or more of several departments including Psychology, Psychiatry, Medical Physics, or Computer Science. We are seeking candidates at any level in the following areas:

Affective/cognitive neuroscientist: We seek a psychologist or neuroscientist who uses functional brain imaging methods to study cognitive and/or affective functions. Preference will be given to individuals studying emotion or higher-level cognition such as memory, or attention.

Functional neuroanatomy of psychiatric illness: We seek an M.D. and/or Ph.D. who uses functional brain imaging in the study of neural bases of major mental disorders.

MR physicist with expertise in functional MRI and interest in cognitive neuroscience applications: We seek a physicist who will take a leadership role in the development of methods for use with the 3T magnet.

Computer scientist with expertise in large-scale complex image analysis applied to functional brain imaging: We seek a computer scientist with interests in the development of new computing tools for functional brain imaging.

Please send material to: **Richard J. Davidson, Chair, Affective/Cognitive Neuroscience Search Committee, Department of Psychology, University of Wisconsin, 1202 West Johnson Street, Madison, WI 53706. E-mail: rjdavids@facstaff.wisc.edu.**

Zebrafish Biology

Mutational analysis provides a powerful method for analyzing the mechanisms that underlie cellular and developmental processes, as has been clearly demonstrated in invertebrates such as *Drosophila* and *C. elegans*. The zebrafish, *Danio rerio*, has recently emerged as an equally powerful system for mutational analysis, and thus provides an exciting opportunity to examine those biological mechanisms unique to vertebrates.

Three tenure-track faculty positions are available that will form the nucleus of an interdisciplinary research group in zebrafish biology. Applications are invited from candidates who are using molecular, cellular, or genetic approaches to study problems in a variety of areas, including developmental neurobiology, pattern formation and morphogenesis, intra- and intercellular signaling and toxicology. Primary appointments will be in one or more of the following Departments: Anatomy, Comparative Biosciences, Genetics, or Zoology.

Applications should include a curriculum vitae, a statement of research interests and teaching experience and interests, and the names and addresses of three references, and should be sent to: **Zebrafish Search Committee, c/o Ms. Heather Daniels, Neuroscience Training Program, 179 Medical Sciences Bldg., 1300 University Ave., University of Wisconsin, Madison, WI 53706.** Specific questions concerning the search can be addressed to **Seth Blair** at sblair@macstaff.wisc.edu.

The University of Wisconsin-Madison is an Equal Opportunity and Affirmative Action Employer. Women and minority candidates are especially urged to apply.

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...of drug development research with DuPont Pharmaceuticals Company. We are focused on meeting unmet medical needs through the discovery and development of innovative compounds leading to novel pharmaceuticals. We have immediate openings at our facilities in Wilmington, DE for the following:

Thrombosis Research

We are seeking an individual to join our multidisciplinary thrombosis and vascular biology team, whose mission is to identify and implement novel approaches for the treatment of thrombotic diseases. M.D. or Ph.D. required with 5+ year's experience of innovative research in thrombosis or coagulation. Whole animal pharmacology skills are required with expertise in pharmacokinetic/pharmacodynamic principles and analytical techniques a decided plus. **Code: EG-T**

Vascular Biology

We are seeking an individual to join our multidisciplinary thrombosis and vascular biology team, whose mission is to identify and implement novel approaches for the treatment of cardiovascular disease. M.D. or Ph.D. required with 5+ year's experience of innovative research on vascular biology. Whole animal pharmacology skills are required. Experience in signal transduction in vascular cells or platelets is highly desirable. **Code: EG-V**

Cardiovascular Research

We are seeking Staff Scientists to join our multidisciplinary thrombosis and vascular biology team, whose mission is to identify and implement novel approaches for the treatment of thrombotic diseases. Candidates will participate in in vitro and in vivo studies for the evaluation of preclinical drug candidates. Whole animal pharmacology skills are required; competency in analytical techniques such as HPLC, ELISA and cytochemical methods is highly desirable. BS or MS degree, or equivalent, required.

Code: EG-SS

DuPont Pharmaceuticals Company offers a competitive salary and generous benefits package including a 401K plan as well as excellent working conditions and challenging assignments. Please send a letter of introduction, resume and one-page summary of your research to: Human Resources-(code), DuPont Pharmaceuticals Company, Experimental Station, E400/2413, P.O. Box 80400, Wilmington, DE 19880-0400. An equal opportunity employer M/F/D/V.

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Senior Scientist



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We are seeking an individual to join a team developing systems for regulating the expression of vector-delivered genes. The successful candidate will have a Ph.D. in a scientific discipline and two-five years post-doctoral experience; or equivalent. Experience in the field of eukaryotic transcription control is required; specific experience in steroid hormone receptors is preferred. A strong background in cellular and molecular biology is essential. This position requires strong analytical and problem solving skills and the ability to work and communicate effectively in a fast paced team oriented environment.

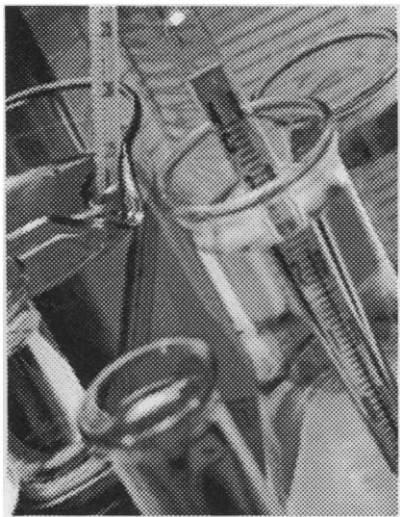
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NOVARTIS

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Analytical/Organic Chemist (MS/Ph.D)

Your primary responsibilities will include operating and maintaining Bruker and NMR instruments and an HP mass spectrometer; interpreting NMR and MS Spectra for structure elucidation to support synthesis; identifying opportunities to solve research problems; and supervising an associate responsible for analytical HPLC, GC and prepLC/MS.

To qualify, you must have a PhD in analytical or organic chemistry (or) an MS with 5+ years of related experience, including at least 2 years focusing on the structure elucidation of small organic molecules using spectroscopic techniques. Working knowledge of NMR and MS operation and theory is also essential, as is the ability to apply emerging NMR and MS technologies to discovery research. Position #9839-SM-BRI

Synthetic Organic Chemist (Project Leader)

As a project leader responsible for achieving results in a particular area (e.g. herbicides, fungicides or insecticides), you will design and implement the synthesis of target molecules to support the development of proprietary chemistry and biochemical assays. You'll also analyze structure-activity relationships and biological data, and supervise Ph.D, BS, and MS positions.

To qualify, you must have a PhD and 7+ years of experience designing and synthesizing biologically active molecules. A proven track record of innovation is essential. Strong knowledge of agricultural chemistry and biochemistry or experience with molecular modeling techniques desirable. Position #9840-SM-BRI

Synthetic Organic Chemists (MS/Ph.D) 2 positions available

Primary responsibilities will include designing and implementing the synthesis of target molecules, analyzing structure-activity relationships and biological data, and performing supervisory/leadership duties.

To qualify, you must have a recent PhD (or) an MS with 5+ years of related experience, including a background designing and conducting multistep syntheses.

A proven track record of innovation is essential.

Knowledge of agricultural chemistry, biochemical knowledge, or experience with molecular modeling techniques desirable. Position #9841-SM-BRI

Synthetic Organic Chemists (BS/MS) 2 positions available

You will conduct laboratory synthesis of target molecules to support the development of proprietary chemistry and biochemical assay development.

You'll also obtain and analyze pertinent purity data, such as HPLC, GC, NMR, IR, and mass spectrometry.

To qualify, you must have an MS or BS and at least 2 years of directly related experience using such techniques as IR, NMR, mass spectrometry, GC, HPLC, and column chromatography. Data interpretation skills are also essential. Familiarity with instrumentation and computer searching is a plus. Position #9843-SM-BRI

Biochemist

(BS/MS) 1 position available

In this role, you'll propagate cell lines used in the production of recombinant proteins, provide input into the design and implementation of cell-based assays, and express validated target genes from plant, insect and fungal sources.

To qualify, you must have a bachelor's or Master's degree in Biological Sciences and at least 2 years experience using cell culture techniques. Also required, a strong understanding of biochemistry and molecular biology, extensive experience working with protein expression systems, and the ability to design and execute experiments using basic molecular biology techniques. Previous protein purification and handling experience is highly desirable. Position #9845-SM-BRI

Novartis offers a competitive salary commensurate with qualifications and experience, a comprehensive benefits package, and an environment conducive to professional achievement. Qualified candidates please paste your c.v. (including a skills list), followed by your coverletter, into the body of an e-mail and send to biotech.jobs@cp.novartis.com. Indicate the position #___ in the subject area. To ensure that your information is uploaded into our HR System, please do not send your resume and coverletter as attachments. An Equal Opportunity Employer.

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PRINCIPAL SCIENTIST, RESEARCH Vaccines Research

Manage, perform and coordinate tasks related to the competitive evaluation of a range of mucosal adjuvants and delivery systems for protein antigens and DNA. We will rely on you to establish state-of-the-art techniques to determine mucosal immune responses. As the PhD we seek, you must have worked in a lab specializing in the evaluation of mucosal immunity. You will need 1-2 years of post-doctoral fellow experience followed by 3-5 years additional experience demonstrating expertise in a range of mucosal-based immunological approaches. Your background should include managerial/supervisory experience and the ability to develop new assays. You must be able to initiate, direct and complete programs while working in a team-oriented environment. **Job Code: 3391**

RESEARCH ASSOCIATE III Vaccines Research

You will write protocols for animal experiments, perform immunoassays/data analysis, and coordinate experiments within the Adjuvant Research Group to support the development of innovative vaccine formulations. You will also be expected to summarize experiments and write protocols/scientific reports. We require a BS/MS in a life science discipline with 2+ years research experience demonstrating knowledge of complex laboratory procedures, including skill in performing immunoassays and computer proficiency with spreadsheet, database, graphics and word processing applications; knowledge of statistical software preferred. You must be a team player with effective verbal and written communication skills and a genuine interest in immunology/vaccine development. **Job Code: 3315**

SR. SCIENTIST, RESEARCH Nucleic Acid Diagnostics, Research

You will identify markers necessary to determine clinically significant antiviral resistance in HIV and other viruses. This will involve interacting with major research institutions to validate the use of nucleic acid tests needed to determine appropriate antiviral therapies. You will also guide the transfer of technology to reference laboratories. You will need a PhD in Biochemistry, Molecular Biology or Microbiology with 6+ years of postdoctoral experience in nucleic acid research and development, along with research experience in HIV. The ability to determine the clinical utility of a new set of diagnostic markers, publication in the field of HIV antiviral resistance research, and the ability to synthesize data for use in presentations at major scientific meetings will be expected. Confident verbal/written communication skills and strong team leadership abilities are required. **Job Code: 3224**

ASSOCIATE III, DEVELOPMENT Nucleic Acid Diagnostics, Assay Development

As a member of the HIV 3.0 IVD Assay Development Team, you will participate in technical efforts to optimize assay formulations, develop assay protocols and define standardization processes for the assay. We require a BS degree and 5-7 years relevant professional experience or MS plus 2-4 years relevant professional experience. Working knowledge of biochemistry, molecular biology, immunology or related discipline is a must. Strong hands-on experimental technique, problem solving and analytical skills plus attention to detail are essential. Excellent verbal and written communication skills will be expected. Experience developing medical diagnostic products (nucleic acid-based experience preferred). Working knowledge of nucleic acid chemistry along with statistics-based experimental design experience desired. You must be a self-starter capable of contributing in an environment with aggressive timelines and changing priorities. **Job Code: 3376**

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MAYO CLINIC DEPARTMENT OF MEDICAL GENETICS



Senior Associate Consultant Position

Mayo Clinic, Department of Medical Genetics, is seeking a clinical geneticist for its expanding clinical genetics program. All applicants must have a M.D. degree and be Board-certified or Board-eligible for certification in clinical genetics by the American Board of Medical Genetics. In addition to participating in existing clinical programs, we seek an individual to expand collaborative initiatives with the Mayo Cancer Center and/or the Molecular Medicine Program. A successful candidate will be expected to participate in education and research activities. Academic rank and salary will be commensurate with experience. Applications should be received prior to October 1, 1998.

Curriculum vitae, a cover letter detailing experience, future interests, and names of three individuals who can provide letters of recommendation should be sent to:

**Gerard Vockley, M.D., Ph.D., Chair
Search Committee for the Department of
Medical Genetics, Mayo Clinic, 200 First
Street S.W., Rochester, MN 55905
FAX: 507/284-1067**

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United States Environmental Protection Agency National Exposure Research Laboratory Human Exposure and Atmospheric Sciences Division

The U.S. Environmental Protection Agency (EPA) is seeking highly qualified senior scientific/engineering candidates for the **Director of the Human Exposure and Atmospheric Sciences Division (HEASD)**, National Exposure Research Laboratory (NERL) located at Research Triangle Park (RTP), North Carolina. The NERL is responsible for conducting research and development related to the exposure of people and ecosystems to a wide range of pollutants in the air, water, and soil, and to other environmental changes resulting from human activities at a wide range of scales. The HEASD conducts intramural and extramural research to characterize exposures, across the whole of the exposure assessment paradigm from pollutant source to the dose delivered to the exposed person or receptor. The principal foci of the Division's research are human exposure to chemical pollutants and atmospheric sciences. The Division's research mission encompasses aspects of all components of the exposure assessment paradigm, including exposure/source research; atmospheric processes modeling research; environmental characterization research, including characterizing microenvironmental concentrations/exposures, and defining the critical routes of exposure; exposure analysis research; and exposure/dose research. The human exposure research has both modeling and measurement aspects. It focuses on exposures to susceptible subpopulations and includes field studies of total exposure measurements, the development of probabilistic human exposure models, and the linkage of these models to environmental process models and dose models to achieve source-to-dose models. The atmospheric sciences portion of HEASD's research includes the development and application of instruments and methods to measure atmospheric pollutants and their precursors; chamber and kinetics studies of the chemistry of air pollutants; the development of source apportionment techniques; and the comprehensive profiling of emissions from on- and off-road mobile sources burning gasoline with and without fuel additives.

The Director of HEASD plans, develops, organizes, directs, and implements a highly technical and complex research and development program that has nationwide impact with an annual budget in excess of \$25M and a staff of approximately 130 employees located in RTP and Las Vegas, Nevada. The Director and scientists under the Director's supervision are the Agency's experts in the area of multipathway, multimedia human exposure to environmental contaminants and atmospheric sciences, measurement methods, chemistry, and source characterization; and, therefore, they interact and represent the Agency to a large community of scientists, both nationally and internationally, as well as to the general public and legislative leaders. Ultimately, the research performed will provide an understanding of the critical factors to be considered in developing and implementing programs for the protection of the public's health.

The preferred candidate for this position will have a doctoral degree in one of the biological, physical, or mathematical sciences or in an engineering field. Candidates must also have scientific expertise in either atmospheric sciences or human exposure to chemicals and have demonstrated leadership in scientific management of state-of-the-art programs in atmospheric sciences or human exposure to chemicals. In addition, applicants must meet the executive and technical qualifications described in the vacancy announcement. **Salary ranges from \$104,577 – \$114,486 per annum**, commensurate with the level of appointment in the Senior Executive Service.

To apply for this position, you must obtain a copy of the vacancy announcement and submit an application containing all the requested information by the closing date of the announcement. **All applications for this position must be postmarked by 9/25/98.** The vacancy announcement may be obtained by calling or writing Ms. Karen Stinson (202) 260-6374, U.S. EPA, Executive Resources & Special Programs (3641), 401 M Street S.W., Washington, DC 20460. The announcement may also be viewed on the Office of Research and Development's Internet Site at <http://www.epa.gov/ord/>.

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**NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE OF MENTAL HEALTH
Division of Basic & Clinical Neuroscience Research**

The National Institutes of Health, National Institute of Mental Health, invites applications for the positions of:

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- **Chief, Neuroendocrinology/Neuroimmunology Program**

The incumbent will manage and develop a portfolio of extramural research grants involving basic and clinical neuroscience research (*and associated novel technologies.)

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A copy of the full text vacancy announcement is available via the World Wide Web: <http://www.nimh.nih.gov/orm/pmb/nimhjobs.htm>. Interested candidates may contact Ms. Margot Darby, NIMH Personnel Management Branch, at (301) 443-9094. Applications will be accepted if postmarked by September 18, 1998 and received within 5 working days.

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SFWMD provides alternative work schedules, job sharing, tele-commuting, tuition assistance, a career center, on campus day care center and wellness programs. Direct all applications, including your social security number and job reference # SM980429CH to:



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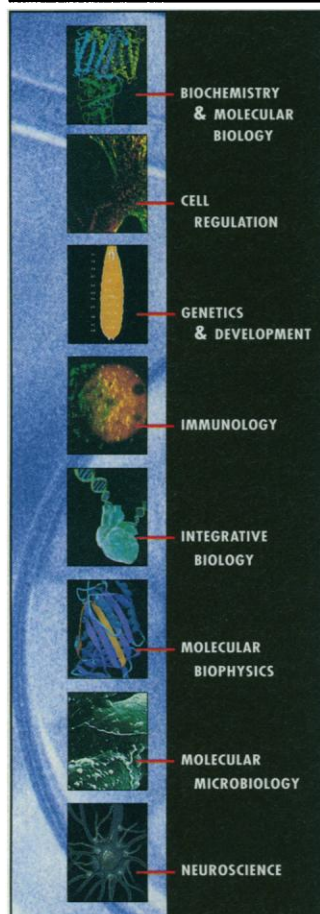
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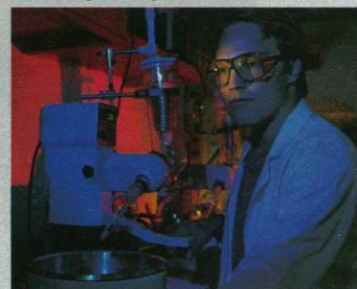
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Chief, Cardiology Branch National Heart, Lung, and Blood Institute National Institutes of Health

The National Heart, Lung, and Blood Institute (NHLBI), NIH invites applications for the position of Chief, Cardiology Branch, Division of Intramural Research (DIR). The Cardiology Branch Chief directs a multidisciplinary basic and clinical translational research program in the cardiovascular area, and serves in a senior administrative management capacity. This position offers an exciting opportunity to make substantial contributions to define the future of cardiovascular investigation in the DIR, NHLBI. The Chief should be an outstanding clinician/investigator, with demonstrated research productivity, leadership abilities, administrative skills, and experience in the training of fellows. The individual will provide scientific, clinical, and administrative direction to develop molecular, cell biological, and clinical aspects of cardiovascular research. In addition, he or she will plan and conduct an independent research program related to cardiovascular disorders. The Cardiology Branch is currently composed of 6 senior investigators with programs in molecular cardiology, vascular biology, peripheral vascular disease, endothelial function and dysfunction, coronary artery disease, and cardiomyopathies. Basic science expertise is complemented by strong clinical programs and state-of-the-art cardiac imaging.

Annual salary range from \$135,000–160,000 per year and additional compensation may be authorized depending on individual's qualifications. Candidates for this position must have either an M.D. or M.D.-Ph.D. degree and be Board-certified in Internal Medicine and Board-certified/eligible in Cardiology or equivalent. The successful candidate will have demonstrated previous success in both laboratory-based and clinical research relevant to the NHLBI mission.

Further information about the position and additional qualification requirements may be obtained from Mr. Don Ouellette by calling 301-496-6477. Candidates should send a curriculum vitae, bibliography, a statement of research plans, and the names, addresses, and telephone numbers of four professional references, postmarked no later than October 31, 1998, to: Mr. Don Ouellette, Personnel Management Branch, NHLBI, NIH, 31 Center Drive, MSC 2484, Building 31, Room 5A28, Bethesda, MD 20892-2484.

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This individual will lead a unit tasked with producing cell-based products. Responsibilities include process development, validation, and production of clinical products. In addition to supervising ongoing activities of a production facility, you will ensure compliance with established regulatory procedures (i.e., GMP, ISO, etc. regulations). Must possess clinical product manufacturing, and process and facility validation experience. Ph.D. required.

Cell Culture Supervisor

You will supervise a cell culture facility that produces cell-based products for clinical use. This individual must be an expert at cell culture techniques, and have experience in clinical production. Supervisory, primary cell culture techniques, and clean room environments experience preferred. Ph.D. required.

Cell Culture Technician

You will carry our cell culture work in a clean room environment in compliance with GMP regulations. This position requires a thorough understanding of cell culture techniques. The individual must be methodical, and familiar with SOPs.

QA Supervisor

You will be required to develop, implement, manage, and supervise all QA systems and activities associated with a cell-based production facility. You will oversee the generation and review of documentation used in GMP, manage audits of production and QC areas, coordinate interdepartmental activities, and prepare manufacturing documentation.

QA Documentation Specialist

You will be responsible for QA documentation associated with a cell culture facility, and manage GMP documentation. SOP writing required. Must be a conscientious individual with a strong background in quality assurance.

QC Supervisor

You will develop, implement, supervise, and maintain analytical test methods and all other QC systems and activities for cell-based products. You will also write and perform validation protocols and reports. Knowledge of PCR-based assays a plus.

QC Technician

Responsible for carrying out a variety of inspections, tests, and sampling procedures for the manufacture of products. Perform QC testing associated with a cell culture facility manufacturing product, and monitor critical equipment and instrumentation. A broad background in analytical methods is essential.

To qualify for all of these positions, you must possess a distinguished degree in Biological Science or a related field, and extensive experience in the Biotechnology or Pharmaceutical Industry. Candidates must also possess a strong working knowledge of GMP regulations; and excellent verbal and written communication, record-keeping, and organizational skills. Supervisory experience a plus.

We provide an excellent salary, a matching 401(K) program, employee stock purchase program, tuition reimbursement, and non-contributing health care including dental and vision. For immediate and confidential consideration, send resume, indicating position of interest, to: Mason & Kichar, Confidential Reply Service, P.O. Box 115, Dept. AD/SNC, Bethany, CT 06524. EOE M/F/D/V.

POST-DOCTORAL POSITIONS

The Children's Hospital of Philadelphia in affiliation with the University of Pennsylvania, currently has six post-doctoral positions available in Pediatric Hematology under the direction of the following faculty:

KATHERINE HIGH, M.D.: Structure/function studies of vitamin K-dependent clotting factors; approaches to gene therapy of Factor IX deficiency, including immune response to the transgene product.

ELEANOR POLLAK, M.D.: Transcriptional control of genes encoding vitamin K-dependent proteins; structure/function studies of coagulation factors.

PETER LARSON, M.D.: Structure/function of vitamin K-dependent coagulation factors, particularly factors IX and X.

GERD BLOBEL, M.D., Ph.D.: Gene expression controlling hematopoiesis, focusing on GATA transcription factors and their coactivators.

J. ERIC RUSSELL, M.D.: Post-transcriptional control of globin gene expression (globin mRNA stability); structure/function studies of embryonic globins.

SRIRAM KRISHNASWAMY, Ph.D.: Function, specificity, and regulation of the enzyme complexes of coagulation.

Candidates for any position must have a strong background in molecular biology, protein purification and analysis, protein chemistry, immunology, and/or generation and characterization of transgenic mice.

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For further information, contact the:

Center for Molecular Biophysics and Biophysical Chemistry,
Rutgers University, Wright-Rieman Laboratories,
610 Taylor Road, Piscataway, NJ 08854-8087.

Telephone: (732) 445-6376

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AviGenics, inc.

AviGenics, inc. is an early-stage, privately held company utilizing avian transgenesis for high-volume, low-cost production of pharmaceutical and industrial proteins, and for improving poultry agronomic traits. The Company's laboratories are located in Georgia, the #1 state in broiler production.

Director of Research

We are seeking a Director of Research to manage and build the Company's ongoing research programs in avian transgenesis. Qualifications include 5–10 years of corporate experience, including research management, as well as an advanced degree in molecular, cellular, or developmental biology. Ideal candidates will have prior experience in animal transgenesis.

As Director of Research, you will be responsible for planning, allocating resources, and coordinating and managing the Company's technology development and applications. AviGenics' research effort will expand rapidly over the next few years and you will be expected to recruit research scientists and technicians continually. Multiple programs applying avian transgenesis in novel commercial applications require that you interact effectively with our corporate partners. You must, therefore, be able to work with a diverse group of scientific and business personnel, and to provide effective leadership in an exciting commercial research environment with strong academic ties.

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RESEARCH ASSOCIATE Enzymology/Bioinformatics

Primary responsibilities will include maintaining cell lines as well as development and implementation of cell-based assays to support the New Lead Discovery Program. BS/MS in Biochemistry, Biology or related discipline and 1-3 years experience are required. Must have experience in tissue culture methods, strong computer and communication skills. Knowledge of modern assay technologies is preferred. **Position Code: TA**

RESEARCH ASSOCIATE Drug Safety/Disposition

Qualified candidate, under supervision of dept. head, will conduct experiments to characterize the pharmacokinetic and other ADME properties of CEP compounds to include; quantitative analysis, data analysis and evaluation of PK/absorption studies. BS/MS, 3+ yrs. exp., computer skills, excellent record keeping and organizational skills are essential. **Position Code: EH**

RESEARCH ASSOCIATE IV Oncology

BA/BS, 7+ years experience with in vitro and in vivo models of angiogenesis. Experience in cell and tissue culture methods is required. **Position Code: 04**

RESEARCH ASSOCIATE IV Oncology

BA/BS, 7+ years experience. Demonstrated expertise with methods of cell culture and flow cytometry is required. **Position Code: 05**

RESEARCH ASSOCIATE IV Oncology

BA/BS, 7+ years experience with methods of cell biology and biochemistry of signal transduction required. Familiarity with molecular biology techniques is preferred. **Position Code: 06**

RESEARCH ASSOCIATE III Oncology

BA/BS, 3+ years experience with in vitro and in vivo models of tumor biology. Ability to perform tumor growth experiments in nude mice is required. **Position Code: 07**

RESEARCH ASSOCIATE II Oncology

BA/BS, 2+ years experience with the ability to perform cell culture-based assays. Experience with animal models of tumor growth is preferred. **Position Code: 08**

RESEARCH ASSOCIATE Formulation Development/Stability

Maintain stability documentation and computer information system. Prepare protocols, perform data entry, distribute and store stability samples, monitor stability chambers, maintain sample inventories, track sample testing, prepare data tables for internal reports, NDA and IND submissions. Qualified candidates will possess a BS in related science and 1+ years experience. **Position Code: JJ**

RESEARCH ASSOCIATES II Molecular Biology

Candidates should have experience in cDNA cloning and recombinant expression of proteins, preferably in baculoviral or mammalian systems, as well as the ability to perform and analyze enzyme assays desired. One position requires 7+ years of experience and one requires 2-3 years of experience. BS in Molecular Biology or related discipline is necessary. **Position Code: SM**

Please send your resume indicating **POSITION CODE** and salary requirements to **Recruitment Manager, Cephalon, Inc., 145 Brandywine Parkway, West Chester, PA 19380-4245**. An Equal Opportunity Employer.

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- Nutrition Sciences

Fellowships are available to candidates with outstanding credentials. Information and applications can be obtained from the LSC web site: www.lsc.psu.edu/GradEd.html or from Janice Kennedy, 519 Wartik Laboratory, The Pennsylvania State University, University Park, PA 16802. E-mail address: lscgradadm@mail.biotech.psu.edu and phone: (814) 865-3155. Penn State is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

www.lsc.psu.edu

COLLOQUIUM

A NATIONAL ACADEMY OF SCIENCES COLLOQUIUM



Plants and Population: *is there time?*

A National Academy of Sciences Colloquium entitled "**Plants and Population: is there time?**" will be held 5-6 December 1998 at the NAS Beckman Center (Irvine, CA, USA). The symposium will ask the question: Is there time enough to develop and implement strategies that will permit the planet to continue to sustain its human population without profound economic dislocation and environmental degradation? The symposium's speakers will consider possible time tables of change in agricultural productivity, as well as the ecological consequences of increasing agricultural production. They will examine the contributions of biotechnology to crop protection, human nutrition and bioremediation. And they will discuss both the past and future of sustainability and biodiversity conservation.

Session I: Demographic and economic projections of food demand and supply.

Speakers: Nikos Alexandratos, D. Gale Johnson, Robert Evenson, Tim Dyson

Session II: Limits on agriculture: land, water, energy and biological resources.

Speakers: David Hoisington, Matthew Thomas, Kenneth Cassman, Vernon Ruttan

After Dinner Speaker: Ismail Serageldin

Session III: Plant and other biotechnologies.

Speakers: Ganesh Kishore, Ilya Raskin, John Ryals, Luis Herrera-Estrella

Session IV: Biodiversity and multiple land use demands.

Speakers: Arturo Gomez-Pompa, Daniel Janzen, David Tilman, Robert Socolow

Organized by: Nina V. Fedoroff, The Pennsylvania State University and Joel E. Cohen, Rockefeller and Columbia Universities

Registration forms may be obtained at: <http://www2.nas.edu/abstract/20fa.html> or from: NAS Colloquium, 519 Wartik Laboratory, The Pennsylvania State University, University Park, PA 16802-5807. Email: sej1@psu.edu. Fax: (814) 863-1357.

BURROUGHS WELLCOME FUND

Awards provide scientists early in their careers with \$210,000 to support basic research in pharmacology or toxicology.

Open to U.S. and Canadian scientists.

The application deadline for 1999 awards is November 2, 1998.

BWF is an independent private foundation established to advance the medical sciences by supporting research and other scientific and educational activities.

4709 Creekstone Drive, Suite 100
Durham, NC 27703-8472
Tel: (919) 991-5100 Fax: (919) 941-5884
E-mail: info@bwfund.org

NEW INVESTIGATOR AWARDS IN THE PHARMACOLOGICAL OR TOXICOLOGICAL SCIENCES

These awards, which provide \$70,000 per year for three years, are intended to foster the career development of researchers who will bring new approaches and novel thinking to pharmacology or toxicology. Candidates have considerable flexibility in proposing research activities, as both fields encompass broad areas. Indeed, BWF encourages candidates to define these fields in the broadest terms, so long as the proposed research has application to either the pharmacological or toxicological sciences. It is anticipated that a total of 12 awards will be made.

Candidates must be citizens or permanent residents of the United States or Canada, have an M.D. or Ph.D. degree, and be independent investigators appointed within three years of the November 2 application deadline to a tenure-track position as an assistant professor or its equivalent. Candidates need not have appointments within established programs in these fields. BWF seeks applications from researchers in such departments and fields as biochemistry, genetics, molecular biology, and the physical and computational sciences, and clinical and veterinary scientists engaged in fundamental research also may apply.

ADDITIONAL FUNDING OPPORTUNITIES FOR BIOMEDICAL SCIENTISTS

Several BWF programs with upcoming application deadlines may be of interest. Career Awards in the Biomedical Sciences provide four to six years of support to bridge advanced postdoctoral training and initial faculty appointment (deadline: October 1). Awards in molecular parasitology, malaria, and molecular pathogenic mycology provide two to five years of support (deadline: January 15, 1999). Research Travel Grants provide support for scientists and medical historians to work for brief periods—from two weeks to six months—in the United Kingdom or the Republic of Ireland (three deadlines per year: March 1, July 1, and November 1).

Program information is available on BWF's website at <http://www.bwfund.org>

BIOMEDICAL FUNDING
OPPORTUNITIES

Cadus Pharmaceutical Corporation, a leader in functional genomics, is creating an integrated program of drug discovery. Focusing primarily on G protein-coupled receptors and their related cell signaling pathways, Cadus exploits the similarities between the yeast and human genomes to create proprietary yeast and mammalian cell-based tools of drug discovery. Cadus has openings for motivated individuals in the following areas.

DRUG DISCOVERY/CELL BIOLOGY

CODE: S-DD PhD scientist with a minimum of 2 years postdoctoral laboratory experience with strong background in molecular biology, mammalian cell culture, and receptor signal transduction research. Previous experience in molecular target-based drug discovery is also desirable. Qualified individuals will work within the drug discovery group exploring cellular signaling pathways and designing/implementing secondary assay systems to analyze potential therapeutics.

RECEPTOR PHARMACOLOGY & BIOCHEMISTRY

Code: S-RPB PhD scientist with a minimum of 2 years postdoctoral research experience with a strong background in G-Protein coupled receptors pharmacology and signal transduction, and BS/MS scientist with a minimum 2 years experience and a strong background in receptor binding and second messenger system assays and yeast and/or mammalian cell culture techniques. Qualified individuals will work with a team of people exploring pharmacological and biochemical characterizations of the interactions between Receptors, G-proteins and Effectors in transformed yeast and mammalian cells.

GENOMICS

CODE: S-G BS/MS scientists with a minimum of 1 year experience in molecular biology and cloning full length cDNA. Experience in cloning vector construction, isolation of cDNAs from large genomic clones or degenerate PCR methodologies is desirable.

MAMMALIAN CELL BIOLOGY

CODE: S-M BS/MS scientists with minimum of 2 years experience in mammalian cell biology and gene expression to join our assay development group. Expertise with mammalian cell culture, signal transduction analysis and strong molecular biology skills are essential. These individuals will be working with projects involving novel whole cell assay systems for G protein-coupled receptor signaling.

MOLECULAR/YEAST BIOLOGY

CODE: S-MYB BS/MS scientists with a minimum of 2 years experience or PhD scientists with a minimum of 3 years postdoctoral research experience in molecular biology for a project expressing mammalian signal transduction proteins in yeast. Background in cellular and molecular biology or biochemistry is required. Experience with yeast and protein analysis is preferred.

In reward for your dedication, Cadus offers competitive salaries and benefits as well as career opportunities in a stimulating environment. Please send your CV and List of References, indicating job code to: **Cadus Pharmaceutical Corporation, 777 Old Saw Mill River Road, Tarrytown, NY 10591-6705; Email: hr@cadus.com. Check out our website at www.cadus.com. EOE**



CADUS

PHARMACEUTICAL
CORPORATION

...turning the Human Genome Project into Drug Discovery

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At Regeneron, we apply the tools of cutting edge

science to discover and develop treatments for serious, often life

threatening, and frequently untreatable diseases. We are currently

seeking individuals to fill the following career opportunities:

If you provide outstanding people with the resources they need, and a creative energetic environment, they will achieve breakthroughs that will benefit the world.

RESEARCH & TECHNOLOGY

■ Program Coordinators

■ Research Associates:

Protein Chemistry Molecular Biology
Microbiology Biochemistry
Histology Tissue Culture
Retinal Research Obesity-related studies

Among some of the skills needed are:

N-Terminal Sequencing PCR
Peptide Mapping HPLC
Recombinant DNA Techniques Cloning
Immunohistochemistry Techniques
Protein Scale-up & expression

CLINICAL AFFAIRS

■ Clinical Research Associate

PRECLINICAL DEVELOPMENT

■ Scientist, Formulation

■ Team Leader

QA & REGULATORY

■ Director, Quality Assurance

■ Director, Regulatory Affairs

■ QA & RA Technicians

Candidates should have excellent analytical and communication skills and be able to work independently as well as part of a specialized team. Interested candidates should view our website at www.regeneron.com for position requirements and responsibilities.

Regeneron is located on a campus like corporate park and offers a comprehensive benefits package. To be considered please send resume and cover letter with salary requirements to:

REGENERON PHARMACEUTICALS, INC.

BIN Sci-8/98

777 Old Saw Mill River Rd, Tarrytown, NY 10591

Fax: (914) 345-7790 E-mail: jobs@regpha.com EOE M/F/D/V

We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.

LOVELACE RESPIRATORY RESEARCH INSTITUTE

Postdoctoral Fellowships

Lovelace Respiratory Research Institute, the nation's only Institute dedicated to eradicating respiratory diseases through research aimed at understanding their causes and biological mechanisms, is committed to recruiting postdoctoral fellows for several programs. Programs targeted for recruitment include Lung Cancer, Immunology, Inhaled Drug Delivery, and Biomarkers.

Postdoctoral fellows trained as molecular biologists will participate in research projects within the lung cancer program directed toward novel gene discovery, mechanisms for gene regulation, elucidating pathways for lung cancer development, and identification of susceptibility factors for cancer. Postdoctoral fellows in the Immunology program will have the opportunity to participate in human asthma studies, use animal models of asthma, and determine the immunotoxicity of xenobiotics at the molecular level. Training in cell and molecular biology is desired for studies focused on pulmonary immunity, the role of eosinophils in airway hyperreactivity, and the evaluation of asthma drugs on the function of mast cells and basophils in the lung.

The Inhaled Drug Delivery program, working together with scientists from the lung cancer program, is focused on recruiting postdoctoral fellows to work in areas of delivery of chemopreventive drugs by inhalation to block cancer progression and in developing gene-directed therapy to treat established tumors.

The Biomarker Program is looking for candidates trained in analytical chemistry to conduct exciting studies that will identify novel biomarkers that elucidate exposure and susceptibility to environmental chemicals. Highly competitive stipends and benefits.

Send cover letter indicating program of interest and resume to: **Dr. Steven Belinsky, Director of Lung Cancer Program; Dr. David Bice, Director of Immunology Program, Dr. Alan Dahl, Director of Inhaled Drug Delivery Program, or Dr. Rogene Henderson, Director of Biomarker Program. Address all correspondence to Lovelace Respiratory Research Institute, P.O. Box 5890, Albuquerque, NM 87185 or e-mail to hmail@lrri.org. Please refer to Job #S3098.**

We are an Equal Opportunity Employer.



PROTEIN DESIGN LABS

Protein Design Labs' interdisciplinary approach to drug discovery integrates computer-based design with molecular biology, immunology and protein chemistry. We have the following Postdoc opportunities available:

POSTDOCTORAL FELLOWS

Molecular Biology

We will rely on you to work on antibody engineering in our active molecular biology group. Requires a PhD in Molecular Biology, Molecular Immunology (or related area) and familiarity with modern molecular biology techniques, including library construction, gene cloning and mutagenesis. Experience in the phage display system is preferred. Job Code: 414.

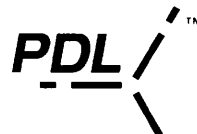
Immunology

Utilizing expertise in human B & T lymphocyte biology, you will conduct independent research focusing on the development of antibody-mediated immunosuppressive strategies. Requires a PhD in Immunology (or related discipline) with experience in the isolation, culture, and functional evaluation of human lymphocyte populations and familiarity with human B&T lymphocyte biology. Experience in hybridoma generation and monoclonal antibody purification, characterization and modification is essential, as is familiarity with flow cytometry, ELISA, and basic protein biochemistry and molecular biology techniques. Job Code: 416.

Inflammatory and Autoimmune Diseases

We will rely on you to study the cellular and molecular mechanisms of inflammatory and autoimmune diseases, using *in vitro* and/or *in vivo* models. You will join an active research group studying the role of cytokines and adhesion molecules in human model systems and in murine models of inflammatory bowel disease and psoriasis. Requires a PhD in Immunology (or related field). Demonstrated experience in a laboratory studying mechanisms of inflammation/autoimmune disease or other basic immunobiology areas is essential. Experience in membrane protein biochemistry or some molecular biology would be preferred. Job Code: 417.

PDL's fast-paced, highly challenging environment offers exceptional professional opportunities, competitive salaries and a comprehensive benefits package. Later in 1998, we will be relocating to Fremont, CA. Visit our home page at www.pdl.com to learn about our company and other career opportunities at PDL. Please send your resume, indicating Job Code, to: Protein Design Labs, Inc., Human Resources, 2375 Garcia Ave., Mtn. View, CA 94043, fax 650/962-0437. EOE.





University of Alberta
Edmonton

Molecular Immunologist Department of Medicine

Applications are invited from individuals with a strong molecular immunology background to participate in a newly formed Clinical Immunology Research Group. This group will develop with support from the Muttart Chair in Clinical Immunology and Autoimmunity to foster research into the molecular aspects of human immunologic diseases, particularly transplantation and autoimmunity. Emphasis will be placed on translational research which has clinical application. The successful applicant will have a PhD, MD or equivalent, a record of peer-reviewed publications in molecular biology and immunology, and the ability to compete successfully for national grant support and develop an independent research program. The successful candidate must be eligible to apply for support to the Alberta Heritage Foundation for Medical Research.

The incumbent will be appointed at the Assistant or Associate Professor rank with a competitive salary package commensurate with training and experience. There will be approximately 1000 square feet of research space available and the individual chosen will have appointments in the Department of Medicine and the Department of Medical Microbiology and Immunology.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. If suitable Canadian citizens and permanent residents cannot be found, other individuals will be considered.

Applications, complete with curriculum vitae and the names, addresses and telephone numbers of three references should be submitted by October 15, 1998 to:

Dr. P.F. Halloran, Director
Division of Nephrology and Immunology
Department of Medicine
University of Alberta
#205, 8249-114 Street
Edmonton, Alberta
Canada T6G 2R8

The University of Alberta is committed to the principle of equity in employment. As an employer, we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.

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For nearly 20 years, Genetics Institute has discovered the breakthrough products and set the direction for an industry. Today, we are a strong, stable force for innovation and excellence in biotechnology. In fact, the past two years saw FDA approval of two milestone products from Genetics Institute. The first, BeneFIX™, Coagulation Factor IX (Recombinant), is a clotting factor used to treat Hemophilia B. The second, Neumega®, is an agent useful in preventing platelet deficiencies in cancer patients undergoing chemotherapy.

Throughout our history, we have demonstrated our commitment to providing our dedicated professionals with everything it takes to meet the challenges that make our environment unique.

Genetics Institute is uniquely positioned to continue its success and growth well into the next millennium. You'll find it's a great organization for building a rewarding career.

For information on exciting job opportunities at Genetics Institute, visit our web site at: www.genetics.com

Cellular Immunologist

To characterize cellular responses and gene expression changes in immune reactions involving T-cells and dendritic cells both in vitro and in vivo. Experience with basic cellular and molecular techniques such as ELISA, PCR, RPA, and cell culture is essential. Knowledge of immunological assays and techniques such as MLRs and migration assays would be an asset. Self-motivation and desire to explore new animal models of immune diseases would be a plus. BS/MS required as well as 1-2 years of demonstrated experience in cellular immunology.

Please send your resume to:
Genetics Institute, Inc.,
Human Resources Department,
Attn: Meghan Dynan, One Burt Road, Andover, MA 01810.
Fax: (978) 623-2607.
E-mail: mdynan@genetics.com

Genetics Institute is a wholly owned subsidiary of American Home Products and offers competitive salaries and benefits, including comprehensive health care, dental and life insurance, three weeks' paid vacation, 401(k), pension plan, relocation assistance, tuition assistance, dependent care subsidy, and an on-site exercise facility.

Genetics Institute is proud to be an equal opportunity employer, dedicated to building strength through diversity.

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LeukoSite, Inc., located in the Kendall Square area of Cambridge, MA, is a leader in inflammation research and the development of novel therapeutics for the selective immunosuppression of chronic inflammatory diseases. We have collaborations with major pharmaceutical companies, leading academic labs in the US and Europe and receive NIH funding.

PH.D. SENIOR SCIENTIST: **IN VIVO PHARMACOLOGY**

We are seeking a creative and highly motivated scientist to join a team focused on the evaluation of novel therapeutic agents in a variety of inflammatory disease models. The successful candidate should have a working knowledge of immunology, inflammation biology, and autoimmune diseases. A Ph.D. in Pharmacology, Immunology or a related discipline, plus 2-5 years' experience in the use of in vivo models is required. Previous experience in the development of methods to evaluate compounds in vitro and in vivo, as well as experience in the biology and pharmacology of chemokines is preferred. **Job Code: BJ1**

G PROTEIN-COUPLED **RECEPTOR BIOLOGIST**

We have an opening for a Senior Scientist or Assistant Director in our Receptor Pharmacology Department. The requirements include a Ph.D. and several years post-doctoral experience in the areas of GPCR biology or drug discovery. The candidate will join an ongoing effort involving research and drug discovery around a series of chemokine receptors and other GPCR important in leukocyte function. The focus would include the creation of novel ligand binding and signaling assays amenable to high-throughput screening, and the biological characterization of screening leads. Additionally, the candidate will be expected to independently carry out research programs in the areas of GPCR structure/function, signaling, and orphan GPCR characterization. The candidate will play a critical role in the advancement of LeukoSite's current drug discovery programs, as well as in the creation of new discovery opportunities. There will be the opportunity to publish results in leading journals, and to present results in both company and external meetings. **Job Code: GL2**

RECEPTOR PHARMACOLOGY **SCIENTISTS**

We also have openings in Receptor Pharmacology for BA or MS level scientists with 2 years' laboratory experience. Qualifications include experience with standard molecular biological techniques, in vitro mutagenesis, radioligand binding assays, reporter gene assays, and/or cell-based assays. Experience with GPCR biology is desirable. The candidate will join our very active drug discovery effort around a series of chemokine receptors with a work focus on the characterization of antagonist activities and mechanism of action. **Job Code: GL3**

POSTDOCTORAL POSITION

This position is available immediately to study anti-inflammatory effects of activated protein C, protein S and thrombomodulin on macrophage gene expression, with relevance to transplantation. Experience in expression cloning and the biochemistry of coagulation proteins is preferred. **For this position only, please respond to Dr. Wayne Hancock at address below or e-mail to: Wayne_Hancock@Leukosite.com.**

Please send your CV with cover letter (identifying position) to: Employee Services, LeukoSite, Inc., 215 First Street, Cambridge, MA 02142. An Equal Opportunity Employer. See our website at: www.leukosite.com.



MOLECULAR MARKER/ BIOLOGIST COORDINATOR

Saskatchewan Wheat Pool's Grain Group, Research and Development Division has a career opportunity available for a *Molecular Marker/Biologist Coordinator*.

The Research and Development Division employs a large complement of scientists in the areas of Crop Agronomy, Cereal Breeding, Value Added Processing, Oilseed Breeding and Biotechnology. The Oilseeds Breeding and Biotechnology group is one of the largest private oilseed development programs in the world and concentrates on canola and flax variety development.



As the Molecular Marker/Biologist Co-ordinator, you will be responsible for molecular marker development for Brassica species, including strategic alliances with other organizations, as well as the identification and development of rapid marker analysis unit to assist in the breeding and biotechnology efforts of the Oilseed Team.



The successful candidate will have a Ph.D. with major specialization in molecular biology, with three (3) years progressively responsible research experience. Equivalent combinations of education and experience will be considered. Other requirements include: demonstrated analytical thinking; excellent judgment; interpersonal; management skills; computer competent and excellent communication skills. Candidates must be bondable. A competitive salary and benefits package is offered.



Interested persons should submit a resumé no later than Wednesday, September 30, 1998.



Saskatchewan Wheat Pool

Saskatchewan Wheat Pool supports and fosters a healthy and safe work environment. We are an equal opportunity employer.

Saskatchewan Wheat Pool
Agriculture Research and Development
201-407 Downey Road
Saskatoon, SK
Canada S7N 4L8
Fax: (306) 668-5564

Visit our Web Site at www.swp.com and/or call our Job Information Line at 1-800-996-3299

An integrated, diversified, dynamic and growing international organization leading in value-added agri-business. Ranked among the top 100 companies in Canada, the Saskatchewan Wheat Pool has grown into the largest grain handler and agricultural co-operative in Canada.

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UNIVERSITY OF VERMONT ASSISTANT/ASSOCIATE PROFESSORS

ENVIRONMENTAL MICROBIOLOGIST/MICROBIAL GENETICIST EUKARYOTIC VIROLOGIST

The Department of Microbiology and Molecular Genetics invites applications for two tenure-track faculty positions. We are soliciting applicants who have demonstrated superior productivity in their respective areas. Applicants must hold a doctoral degree, have had postdoctoral research experience, and are expected to establish a vigorous, independent research program as well as contribute to the Department's teaching responsibilities. Details about the Department and the University may be accessed at: <http://salus.med.uvm.edu/mmg/mmg.html>.

1. **Environmental Microbiologist**—The successful candidate will have demonstrated expertise in microbial physiology and molecular genetics. Potential research areas include molecular approaches to bioremediation, biofilm formation, soil, subsurface and aquatic microbiology. Opportunities for collaborative research exist in the Departments of Plant and Soil Science, Botany, Civil Engineering, and the School of Natural Resources.
2. **Eukaryotic Virologist**—Potential research areas include molecular genetic approaches to pathogenesis, virus-host cell interactions, and gene regulation. Opportunities for collaborative research exist both within and outside of the Department in the areas of signal transduction, pathogenesis, and nucleic acid transactions.

Each applicant should submit a letter of interest, a curriculum vitae with a description of research interests, and have three letters of reference sent to: **Dr. Warren I. Schaeffer, Environmental Microbiologist Search Committee Chair, or Dr. Gregory M. Gilmartin, Eukaryotic Virologist Search Committee Chair, Department of Microbiology and Molecular Genetics, Stafford Hall, University of Vermont, Burlington, VT 05405.** Review of applications will begin immediately and continue until the Deadline for submission of applications, October 31, 1998. *The University of Vermont is an Equal Opportunity, Affirmative Action Employer. Women and minorities are encouraged to apply.*

ANNOUNCEMENT

Juvenile Diabetes Foundation International
The Diabetes Research Foundation

REQUEST FOR APPLICATIONS



Research Grants

Deadline for receipt of applications:

October 1, 1998 (for funding beginning in February 1999)
March 1, 1999 (for funding beginning in July 1999)

For additional information see JDF's Web Site at:

www.jdfcure.org ("JDF announces additional \$20 million...
"Funding Information" "Research/Training Applications Forms")

T H E H P W A Y

**It's the way
we stand behind
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Hewlett-Packard, one of the "Most Admired Companies in America" according to *Fortune* magazine's latest ranking of U.S.-based companies, is a global leader in everything from PCs and printers, to test and measurement systems. Currently, we have challenging and rewarding opportunities for experienced Materials Development Scientists/Engineers. Consider the following opportunities available in the Pacific Northwest.

Materials Development Scientists/Engineers

Multi-layer film and barrier materials R&D

Lead efforts to develop innovative multi-layer films for the future generations of Hewlett-Packard products. Responsibilities will include evaluating the film needs of future HP products; designing multi-layer film structures to meet such needs; and identifying/developing barrier, adhesion and plastic materials for the films. Ideal candidate will possess a Ph.D. or equivalent, and 2-5 years' R&D industrial experience in single or multi-layer films, thin metal film deposition, separation membranes, or polymers, though comparable experience will be considered.

Adhesives and film adhesion materials R&D

Provide technical leadership in the development of innovative adhesives for future generations of Hewlett-Packard products. Responsibilities will include evaluating adhesive needs of HP future products; developing adhesive formulations, surface modification and adhesive curing methods to meet such needs; and establishing fundamental understanding of interfacial adhesion and adhesive life. Ideal candidate will possess a Ph.D. or equivalent, and 2-5 years' R&D industrial experience in adhesives, adhesion improvement, solid/liquid and solid/solid interfaces, or adhesion/tie materials for films, though comparable experience will be considered.

Both positions require excellent communication skills and demonstrated experience succeeding in a cross-functional and cross-disciplinary environment. Must be highly self-motivated and amenable to occasional business travel.

Hewlett-Packard offers highly competitive salaries and comprehensive benefits, including profit sharing, stock purchases, 401K and a retirement plan. For consideration, please send your resume with cover letter (indicating Materials Development Scientists/Engineers in the Pacific Northwest) to: Hewlett-Packard Employment Response Center, Ad #6756, 3000 Hanover Street, MS20AZ, Palo Alto, CA 94304-1181, FAX: (650) 852-8138, or e-mail: resume@hp.com

Hewlett-Packard Company is an equal opportunity employer dedicated to affirmative action and workforce diversity.



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POSITIONS OPEN

FACULTY POSITIONS IN VETERINARY PATHOBIOLOGY

The College of Veterinary Medicine, University of Illinois at Urbana-Champaign announces the availability of the following positions in the Department of Veterinary Pathobiology, Division of Pathology and Comparative Medicine. A full description can be assessed at [website: www.cvm.uiuc.edu](http://www.cvm.uiuc.edu). Salary will be based on experience and qualifications. For full consideration, applications should be received by September 15, 1998. Starting date is negotiable.

EXPERIMENTAL PATHOLOGIST

Applicants for this **ASSOCIATE** or **FULL PROFESSOR** position must have a D.V.M., M.D., or equivalent degree and a Ph.D. ACVP Board certification or equivalent is preferred. A strong independent research program in infectious diseases, toxicologic pathology, reproductive pathology, or food safety is desirable. Duties include maintenance of a well-funded research program and teaching in both the professional and graduate programs.

ACADEMIC VETERINARY PATHOLOGIST

Applicants for this position at **FULL** or **ASSOCIATE PROFESSOR** level must have ACVP Board certification and evidence of a well-funded independent research program; for **ASSISTANT PROFESSOR** level, ACVP Board certification or commitment to achieving certification within two years and evidence of a potential or developing independent research program are required. Additional requirements are a clear commitment to academic veterinary pathology. Duties include teaching veterinary pathology in the professional program, development of an independent research program, and service in the Laboratories of Veterinary Diagnostic Medicine.

The Department of Veterinary Pathobiology is a vigorous multidisciplinary department with many opportunities for collaborative research, especially in mechanisms and epidemiology of infectious diseases, food safety, toxicologic pathology, animal models of human disease and molecular immunology, environmental toxicology, and reproductive biology.

A letter of application including a statement of goals, a complete résumé, and the names, addresses, and telephone numbers of three references should be sent to: **Dr. Matthew Wallig, Chair, Search Committee, Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois at Urbana-Champaign, 2001 South Lincoln Avenue, Urbana, IL 61802. E-mail: m-wallig@uiuc.edu; Telephone: 217-244-0138 or 217-333-2449; FAX: 217-244-7421.**

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

FACULTY POSITIONS DIVISION OF BASIC SCIENCES Fred Hutchinson Cancer Research Center

The Division of Basic Sciences of the Fred Hutchinson Cancer Research Center is soliciting applications at the **JUNIOR FACULTY** level. Applicants with outstanding accomplishments in any field of molecular, cellular, and/or developmental biology will be considered. Candidates should send a curriculum vitae, a concise statement of his/her research plans, and three letters of reference to:

**Basic Sciences Faculty Search Committee
Fred Hutchinson Cancer Research Center
Division of Basic Sciences
Mailstop: A2M-015
1100 Fairview Avenue North
P.O. Box 19024
Seattle, WA 98109-1024**

Application deadline: October 15, 1998.

FHCRC is an Equal Opportunity Employer committed to work force diversity and provides a smoke-free environment. We strongly encourage applications from women and minority groups.

MEDICAL DIRECTOR Ph.D., Pharm.D., or M.D.

Medical education firms seeks Medical Director due to growth and success in providing high-quality medical education programs for its major pharmaceutical clients.

Experience in analyzing and writing primary research publications and review articles is required. Preference will be given to candidates with a background in cardiovascular medicine and endocrinology. Ability to communicate well and participate in goal-directed teams is essential. Mail résumé to: **Applied Clinical Communications, 1160 Parsippany Boulevard, Parsippany, NJ 07054. FAX: 973-316-5997; e-mail: jdagnese@appliedclinical.com.**

POSITIONS OPEN

FACULTY POSITIONS IN CELLULAR AND MOLECULAR BIOLOGY DEPARTMENT OF BIOLOGY The University of Michigan

The Department of Biology at the University of Michigan solicits applications for two **TENURE-TRACK** faculty positions in (i) animal physiology, and (ii) cell biology.

Animal physiology. We seek an individual who uses integrative, multidisciplinary approaches, including current molecular biology techniques to study fundamental problems in animal physiology. The successful candidate will interact with one or more of several research groups within the Department, including cellular and molecular neurobiology, endocrinology, and ecology and evolution.

Cell biology. We seek an individual who uses a wide range of genetic, biochemical, and molecular approaches to study fundamental problems in cell biology. The successful candidate will likely work with *Saccharomyces cerevisiae*, and join an active and expanding group of Cellular and Molecular Biologists interested in a variety of fundamental biological questions.

For both positions, a Ph.D. in biology or a related field as well as postdoctoral experience is required. In addition to establishing a successful research program, the successful candidates will be expected to participate in undergraduate and graduate teaching programs of the department. To apply, send a curriculum vitae, copies of reprints, brief summaries of present research and future research plans, and arrange to have three letters of reference sent to:

**Chair, Department of Biology
University of Michigan
Natural Sciences Building
Ann Arbor, MI 48109-1048**

Please indicate clearly in the cover letter for which position you wish to apply. Review of applications will commence October 12, 1998.

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

DEAN. Finch University of Health Sciences/The Chicago Medical School invites nominations and applications for the position of Dean of the Medical School. The Dean reports directly to the Chief Academic Officer, and is responsible for the School's academic, fiscal, and administrative functions. Reporting to the Dean are the Associate Deans for Educational and Clinical Affairs, and the Chairs of the Clinical and Basic Science Departments.

The candidate must have earned an M.D. or M.D.-Ph.D. degree, and be a nationally recognized leader in health science research and education. The Dean is expected to delegate administrative authority; develop and manage administrative support systems (financial plans, budgets, and resources); lead in the development of the School's policies and procedures; be responsible for quality, efficiency of delivery, relevance, and value of educational, research, and clinical programs; represent the Medical School at professional councils and activities; and promote communication internally and externally.

Nominations and applications will be accepted immediately and reviewed until the position is filled. Address correspondence to: **William Schumer, M.D., Chair, Dean's Search Committee, Finch University of Health Sciences, The Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.**

A nondiscriminatory Affirmative Action Employer.

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM Cognitive Neuroscience Research

National Institute on Alcohol Abuse and Alcoholism (NIAAA) is recruiting for a **TENURE** or a **TENURE-TRACK POSITION** to establish an independent program in cognitive neuroscience research related to alcoholism and related disorders. Current areas of research in NIAAA's Laboratory of Clinical Studies include attention, memory, and emotion as they relate to brain structure and function. However, the individual will be free to pursue any area of cognitive research related to alcoholism. Extensive support for both functional and structural brain imaging is available in the Laboratory, including fMRI and PET. Applicants should have a doctoral degree and should send a curriculum vitae, a detailed statement of research interests, and three letters of recommendation to: **Leslie Ungerleider, Chair, Cognitive Neuroscience Search Committee, NIMH, Building 10, Room 4C104, Bethesda, MD 20892-1366.** Deadline for receipt of all materials is September 30, 1998.

POSITIONS OPEN

Biology Faculty. **TENURE-TRACK POSITION** available beginning September 1999. Earned Ph.D. with specialization in cell biology and teaching experience required. Candidates must be committed to excellence in teaching. Successful performance in an on-campus interview, including a teaching session, is required. Perceived ability to work productively with students and colleagues required. Preference will be given to candidates demonstrating familiarity with a broad range of continuous assessment techniques, the use of instructional technology in the teaching-learning process, and the role of faculty in student success, recruitment, and retention. Responsibilities will include teaching cell biology for majors, some combination of histology, immunology, or related courses and introductory nonmajor courses; establishing a research program involving undergraduates; academic advising; and other duties as assigned. Candidate must provide evidence of teaching and research effectiveness. Slippery Rock University faculty salaries range from \$30,823 to \$77,889 for the academic year. Summer teaching may be available. Send letter of application, curriculum vitae, graduate and undergraduate transcripts (official transcripts will be necessary before hiring), statements of long-term goals, research interests, and teaching philosophy, and the names, addresses, and telephone numbers of three references to: **Dr. Jack R. Layne, Chairperson, Cell Biologist Search Committee, Biology Department, Slippery Rock University, Slippery Rock, PA 16057. FAX: 724-738-2188; e-mail: jack.layne@sru.edu.**

Review of applications will begin October 15, 1998. Slippery Rock University is a member of the State System of Higher Education and is an Affirmative Action/Equal Opportunity Employer building a diverse academic community and encourages minorities, women, veterans, and persons with disability to apply. You can learn more about us on our website: www.sru.edu/depts/artsci/bio/.

CELL BIOLOGY POSITIONS

The Department of Cell Biology has tenure-track faculty positions available at all levels for appointment in the fall of 1998. Applicants should hold a Ph.D., M.D., or equivalent degree. Candidates for senior positions should have funded and established independent research programs. Applicants using molecular, genetic, or biochemical approaches to investigate fundamental problems in cellular and developmental aspects of neurobiology are especially encouraged to apply. Opportunity exists for interactions with Investigators at the Oklahoma Center for Neuroscience, Dean A. McGee Eye Institute, and the Oklahoma Medical Research Foundation. Department responsibilities include teaching cell biology, pharmacology, and anatomy to professional and graduate students. Applicants should submit their curriculum vitae, a summary of past and proposed research, and names of three references to: **Robert E. Anderson, M.D., Ph.D., Professor and Chairman, Department of Cell Biology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190. Telephone: 405-271-2377; FAX: 405-271-3548; e-mail: robert-anderson@ouhsc.edu.** Visit our website: http://w3.uokhsc.edu/cell_biology. *Equal Opportunity/Affirmative Action Employer.*

SENIOR ASSOCIATE DEAN FOR BASIC SCIENCE AND RESEARCH

The University of Nevada School of Medicine is seeking a full-time Senior Associate Dean for Basic Science and Research at its Reno campus. Responsibilities include fostering research goals and policies; diversifying the school's research enterprise and broadening its financial resources; administering the Office of Medical Research; working with basic science Chairs and the Office of Medical Education to facilitate graduate and medical student education, and to oversee research training programs; establishing and maintaining regular communications with the Dean, Chairs, and faculty; and coordinating personnel activities of basic science departments. Required: a doctoral degree, excellent communications skills, and the ability to facilitate group process. Preference will be given to individuals with experience in medical and graduate education, biomedical science administration, and those with an outstanding record of scholarship and research productivity. Submit curriculum vitae to: **David Lupan, Ph.D., Chair, Search Committee, Microbiology/320, University of Nevada School of Medicine, Reno, NV 89557.** Applications received by September 21, 1998, are assured a complete review.

Affirmative Action/Equal Opportunity Employer.

CHIEF, VIRAL AND RICKETTSIAL ZOOONOSIS BRANCH

DIVISION OF VIRAL AND RICKETTSIAL DISEASES NATIONAL CENTER FOR INFECTIOUS DISEASES CENTERS FOR DISEASE CONTROL AND PREVENTION

The Centers for Disease Control and Prevention is seeking qualified applicants for Chief of the Viral and Rickettsial Zoonosis Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases. The person will provide overall supervision for approximately 54 staff working with rickettsia and rickettsia-like organisms (*Rickettsia sp.*, *Ehrlichia sp.*, *Bartonella sp.*) and rabies and rabies-related viruses (Lyssaviruses). Research in the Viral and Rickettsial Zoonosis Branch focuses on the epidemiology, pathology, diagnosis, and prevention of disease syndromes associated with these organisms, as well as characterization of the microbiology and life cycles of the disease agents. Microbiologists, physicians, or veterinarians with research experience in rickettsia and rickettsia-like organisms (*Rickettsia sp.*, *Ehrlichia sp.*, *Bartonella sp.*) or rabies and rabies-related viruses (Lyssaviruses) and experience leading research programs are encouraged to apply.

Qualifications preferred include a doctoral degree, significant scientific accomplishments in one or more areas of relevant research, and experience in developing, supervising, and leading a research program.

Salary range is \$77,007 to \$151,800 per annum, depending on qualifications.

Further information can be obtained from **Larry J. Anderson, M.D., Chairman, Viral and Rickettsial Zoonosis Branch Chief Search Committee, Mailstop A34, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333; Telephone: 404-639-3596; FAX: 404-639-1307; or E-mail: lja2@cdc.gov.**

Interested candidates should send their curriculum vitae in confidence along with the names of four professional references to **Centers for Disease Control and Prevention, Attention: Ms. Janie L. Oddy, MS C-19, 1600 Clifton Road, Atlanta, GA 30333** or by E-mail to jlo0@cdc.gov.

CDC is an Equal Opportunity Employer and provides a smoke-free work environment.

Postdoctoral Positions

Genetics and Molecular Biology Branch National Human Genome Research Institute National Institutes of Health

Postdoctoral research positions immediately available in the following areas of molecular genetics:

Dr. Melissa Ashlock

Human artificial chromosome (HAC) development including production and delivery to cells. Studies in human cells involving optimizing transfection efficiency and HAC stability, and assessing gene expression.

Dr. David Bodine

Hematopoietic stem cell (HSC) biology, including the isolation and characterization of novel gene sequences expressed in HSC, and *in vivo* and *in vitro* expansion of HSC. Studies involving the transduction of HSC for gene therapy of hematopoietic diseases, particularly the hemoglobinopathies.

Dr. Dan Tagle

Huntington's disease—Development of cellular models; identification of interacting proteins; characterization and analyses of mouse models.

Dr. Jennifer Puck

Inherited disorders of the immune system, including primary immunodeficiencies and apoptosis defects. Studies in humans and mouse models involving gene identification, mutation detection, pathogenesis, and gene transfer therapy.

Candidates with an M.D. and/or Ph.D. and <5 years of postdoctoral experience should send a C.V., names of 3 references, and one-page statement of research interests to an investigator named above at: **NHGRI/NIH, Bldg. 49, Rm. 3A 14, 49 Convent Dr., Bethesda, MD 20892-4442**. Further information may be obtained online at http://www.nhgri.nih.gov/Intramural_research/People/. Successful applicants will be expected to write a research proposal within their first 6 months of arriving at NHGRI. *The NIH is an Equal Opportunity Employer and applications by women and minorities are strongly encouraged.*



Department of Biology

MICROBIOLOGY

The Department of Biology of the University of Waterloo is seeking a MICROBIOLOGIST prepared to establish an active research program in environmental microbiology, microbial biotechnology, or similar areas. Duties include teaching at the undergraduate and graduate levels, and graduate student supervision. We will entertain applications from candidates of all nationalities, and at the rank of assistant, associate, or full professor.

Salary will be commensurate with qualifications and experience. Applicants should send their curriculum vitae, the names of three individuals willing to furnish letters of reference, and an outline (1–2 pages) of their proposed research program to: **Dr. William D. Taylor, Professor and Chair, Department of Biology, Faculty of Science, University of Waterloo, Waterloo, Ontario N2L 3G1 CANADA.**

The closing date for applications is **September 30, 1998**.

In accordance with Canadian Immigration requirements, equally qualified Canadian citizens and permanent residents will be given first preference. The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native peoples, and persons with disabilities.

Additional information on the Department is available at <http://www.science.uwaterloo.ca/biology/biology.html>.



ASSISTANT/ASSOCIATE PROFESSOR

The department of physiology has reopened the search for the position of Assistant or Associate Professor. The successful candidate will possess the Ph.D. degree or equivalent, have 2 years of postdoctoral experience and be an enthusiastic and accomplished teacher. Teaching in the areas of genetics, respiratory or exercise physiology or endocrinology a plus. The position offers an exciting opportunity to make a major departmental contribution to the educational philosophy and process at a dynamic medical teaching institution. The position involves playing a significant role in the teaching of medical physiology and productivity in scholarly activity. Those with research interest(s) in respiratory control, exercise or molecular biology or with proven research track records in other research areas are encouraged to apply. Please send a curriculum vitae, statement of professional goals, and names and addresses of 3 references to: **Dawn M. Harrington, Director of Human Resources, University of Health Sciences, College of Osteopathic Medicine, 1750 E. Independence Blvd., Kansas City, MO 64106.**

All inquiries will receive a written response and submitted information will be forwarded to Gary O. Ballam, Ph.D., Chairman, Department of Physiology. EOE

POSITIONS OPEN

DIRECTOR, OFFICE OF PLANT AND DAIRY FOODS AND BEVERAGES CENTER FOR FOOD SAFETY AND APPLIED NUTRITION

The Center for Food Safety and Applied Nutrition (CFSAN) is part of the Department of Health and Human Services, Food and Drug Administration (FDA) and is located in Washington, D.C. The Director, Office of Plant and Dairy Foods and Beverages (OPDFB), will serve as a principal advisor to the Director of CFSAN on food safety policy issues, field programs, and initiatives that have an impact on Center and Agency-level decisions, policy development, nationwide program execution, and short- and long-range program goals. The incumbent will lead and direct a scientific multidisciplinary, professional, and technical staff responsible for administering extensive nationwide programs that provide the Agency with the scientific knowledge and data required to enforce the Food, Drug, and Cosmetic Act and related legislation and regulations governing the broad areas of food production and packaging and the role of chemical and microbial contaminants in food safety. This position may be filled in the Senior Executive Service, the Senior Biomedical Service, or Title 38 for Physicians. The salary range is \$106,412 to \$151,800. Applicants must have an M.D. degree from an approved medical school, or a Ph.D. or equivalent degree in the biological, physical, or health sciences. For further information about the qualifications contact: Ms. Lynnitia Parrish, Telephone: 301-827-4178. Submit application material by October 9, 1998, to: Lynnitia Parrish, Office of Human Resources and Management Services, Food and Drug Administration, Room 7B-32, HFA-408, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857.

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FACULTY POSITION HYDROLOGY/WATER RESOURCES

The graduate and professional School of Forestry and Environmental Studies, Yale University, invites applications for an ASSISTANT PROFESSOR position in hydrology and water resources.

Required qualifications include a Ph.D. degree in hydrology or a related field. Preference will be given to individuals with postdoctoral/professional experience and/or demonstrated promise of research and teaching excellence. We seek a Hydrologist who will establish a vigorous research program, preferably in interactions, or hydrologic linkages to chemical processes. Also encouraged to apply are Hydrologists in any other areas that complement our interdisciplinary graduate program (website: <http://www.yale.edu/forestry>) and emphasize the solution of environmental problems. Excellent opportunities exist to interact with faculty and students of the School, the Yale Center for Earth Observation, and other Yale departments and units. The position's teaching component will comprise a graduate-level general hydrology course, an advanced hydrology course, and a seminar.

Applicants should send a curriculum vitae, a statement of research and teaching interests, two reprints or other professional publications, and a list of three references to: Professor Thomas Graedel, School of Forestry and Environmental Studies, Yale University, 285 Prospect Street, New Haven, CT 06511 USA. Telephone: 203-432-9733; FAX: 203-432-5556; e-mail: thomas.graedel@yale.edu. The deadline for applications is 1 October 1998 or until a suitable applicant is found. The position is available on 1 January 1999. Yale University is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are encouraged to apply.

FACULTY POSITION. Fox Chase Cancer Center (website: <http://www.fccc.edu>) invites applications for a TENURE-TRACK faculty-level position in animal virology. Candidates should be interested in viral pathogenesis, viral immunology, or molecular virology and will be expected to maintain an independent competitive research program. The existing virology program is composed of seven Principal Investigators with emphases that include both viral replication and pathogenesis. The closing date for applications is December 1, 1998, or until a suitable candidate is identified. Applicants should submit a curriculum vitae, a statement of research plans, and have three letters of reference sent to: Dr. Anna Marie Skalka, Director, Basic Science Division, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111-2497. Telephone: 215-728-2490; FAX: 215-728-2778; e-mail: am_skalka@fccc.edu. Fox Chase is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FULL PROFESSOR MOLECULAR TOXICOLOGY DIVISION OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH School of Public Health University of Minnesota

This is a new faculty position (100 percent-time, 12-month, tenured) at the rank of Full Professor. Requirements include an earned doctorate in toxicology, pharmacology, biochemistry, or a related field; current academic rank of tenured Full Professor; demonstrated expertise using techniques in molecular and cellular biology to develop innovative *in vitro* and *in vivo* models to investigate molecular mechanisms of toxicity or carcinogenesis; active research program, a successful record of training graduate students, and a record of stable external funding. The successful candidate is expected to maintain an independent, extramurally funded research program, and to develop an interdisciplinary and interdepartmental toxicology graduate training program. Opportunities exist for collaboration within the division, and other University departments and programs, including the University of Minnesota Cancer Center. Applicants should send a curriculum vitae, statement of research activities and research plans, and names and addresses of three references to: Chair, Toxicology Search Committee, Division of Environmental and Occupational Health, Box 807 Mayo, 420 Delaware Street S.E., Minneapolis, MN 55455. Applications will be accepted through October 31, 1998.

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

TENURE-TRACK FACULTY POSITION IN IMMUNOLOGY

The Department of Biological Sciences at California State University, Long Beach, invites applications for a tenure-track faculty position (ASSISTANT PROFESSOR) in immunology beginning fall 1999. Candidate must have a Ph.D. in the biological sciences with training and research in immunology. All areas of immunology considered with preference given to a Comparative Immunologist. Teaching responsibilities include undergraduate and graduate courses in immunology and a specialty course related to the candidate's research interests.

Candidate must have a strong commitment to teaching at the undergraduate and M.S. levels and participate in introductory courses in an ethnically and culturally diverse campus community. Must have a record of published research and show potential for developing and sustaining an independent, externally funded research program involving students. Postdoctoral or other professional research experience preferred. Research start-up funds are available. Submit a letter of application, curriculum vitae, a detailed statement of research and teaching interests, an unofficial transcript with relevant courses, and three letters of recommendation to: Dr. Laura Kingsford, Chair, Attn: Immunology Search, Department of Biological Sciences, California State University, Long Beach, CA 90840-3702. Telephone: 562-985-4807; FAX: 562-985-8878. Screening will commence September 15, 1998. California State University, Long Beach is an Equal Opportunity/Affirmative Action/Title IX Employer.

FACULTY POSITION IN PHARMACEUTICAL SCIENCES

The College of Pharmacy invites applications for a nine-month, tenure-track position in pharmaceuticals. Successful candidates must hold a Ph.D. with a background in pharmaceuticals applicable to the requirements of a professional pharmacy program. The candidate's research interests should be complementary to the current areas of research in the department, including cellular control mechanisms, metabolism, cancer, neuropharmacology, toxicology, immunology, and drug delivery. Candidates able to maintain an extramurally funded research program, with evidence of scholarly productivity, and with experience in pharmacy education are preferred. Interested individuals should submit an application letter containing a summary of teaching and research interests, curriculum vitae, and the names, addresses, and telephone numbers of three references to: Eric J. Jarvi, Ph.D., Chair, Search Committee, Campus Box 8334, Pocatello, ID 83209. E-mail: jarvie@otc.isu.edu. The position will be available July 1, 1999, and will remain open until filled. Idaho State University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

TENURE-TRACK/TENURE FACULTY POSITION

Department of Molecular and Cellular Pathology

Individuals with outstanding research accomplishments in the general areas of molecular and cellular physiology are invited to apply for a tenure-track/tenured position at the level of ASSISTANT through FULL PROFESSOR. The successful candidate must be prepared to participate actively in quality graduate and medical education and will be expected to establish and maintain a vigorous research program of medical relevance. Applicants at the Associate or Full Professor level must currently be directing successful well-funded research programs in areas complementary to existing faculty interests.

The applicant's research should employ the use of modern biochemical, molecular, and/or cell biological techniques to study the regulation of cell and/or organ system function by developmental, environmental, or endocrine signals. The candidate should have an interest in dissecting the signaling pathways that mediate these regulatory actions, and have the capability to do so.

Applicants should submit a curriculum vitae and a brief summary of research interests and goals to the individual below. Letters of recommendation will be requested following an initial evaluation:

Professor J. Wesley Pike
Molecular Physiology Search Committee
Department of Molecular and Cellular Physiology
P.O. Box 670576
University of Cincinnati
Cincinnati, OH 45267-0576

The Department of Biological Sciences at Louisiana State University (LSU) invites applications for an anticipated TENURE-TRACK faculty position in the area of evolutionary theory (phylogenetic theory/molecular phylogenetics/speciation).

LSU has outstanding computer facilities, including advanced parallel computing laboratories, and it is likely that the successful applicant will use and develop computer-based algorithms in his or her research area. The applicant will have the ability and interest to interact with more than 35 experimentally oriented scientists in LSU's interdepartmental systematics and evolutionary biology group. Teaching responsibilities will depend on the experiences of the applicants and needs of the department. Applicants must have a Ph.D. or equivalent degree in a biological science, and postdoctoral experience in an appropriate area of evolutionary theory or related field is desirable. Salary and rank will be commensurate with education and experience. Send curriculum vitae, statements of teaching and research interests, and the names and e-mail addresses of three references by mail to: Dr. Meredith Blackwell, Department of Biological Sciences, Louisiana State University, Baton Rouge, LA 70803. E-mail: btblac@unix1.sncc.lsu.edu. Review of applications will begin on October 1, 1998. For additional information about the Department of Biological Sciences visit our website: <http://chrs1.chem.lsu.edu/~biosci/>. Reference number 0040.

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TENURE-TRACK FACULTY POSITION IN STRUCTURAL BIOLOGY

The School of Biological Sciences, University of Missouri-Kansas City (UMKC), invites applications for a tenure-track faculty position (ASSISTANT or ASSOCIATE PROFESSOR) in structural biology. Consideration will be given to applicant research areas compatible with, but not limited to, existing lines of the School's research focus on molecular recognition, including macromolecular assembly. We seek an outstanding scholar with demonstrable achievements in research, teaching experience in an English-language institution, and exemplary communication and supervisory skills. Teaching activities will involve participation in at least two of the following disciplines: biophysics, biochemistry, molecular biology, cell biology. State-of-the-art research facilities, competitive salary, start-up funds, and fringe benefits are available. Review of applications will begin September 15, 1998, and will continue until the position is filled. Submit curriculum vitae with summary of present and future research interests, and request that three letters of recommendation be forwarded to: Cell Biology and Biophysics Search Committee, Division of Cell Biology and Biophysics, School of Biological Sciences-BSB 403, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110-2499.

Equal Opportunity/Affirmative Action Employer.

AWARD

Announcing.....Competition for the 1999 Children's Brittle Bone Foundation Treatment Challenge Awards and Fellowships!

TREATMENT CHALLENGE:

The Children's Brittle Bone Foundation (CBBF) invites grant applications for basic and/or clinical research projects to develop novel strategies for treatment of osteogenesis imperfecta (OI) or into areas of research which may yield novel insights into the biology of OI.

Funding Mechanism: The awards will provide up to **\$100,000 per year** in direct costs to the investigator, for up to three years. Funding will begin July 1, 1999. These funds may be used towards, salary for the principal investigator, post-doctoral fellows and doctoral students, research assistants, or clinical co-ordinators. Funds may also be applied towards laboratory supplies, equipment, and animal expenses. If indirect costs are requested, they may not exceed 10% of the direct costs per year.

Eligibility Requirements: Applications may be submitted by domestic and foreign, non-profit and for-profit, public and private organizations. Applications from minority individuals and women are encouraged. Applicants should hold a MD and/or Ph.D. (or equivalent). It is expected applicants will have established a successful record as an independent scientific investigator.

INQUIRIES:

Direct inquiries to:

Dr. Matthew Breyer, MD
Vanderbilt University Medical School
Division of Nephrology
S-3223 MCN
Nashville, TN 37232

e-mail:
Matthew.Breyer@mcmail.vanderbilt.edu
phone:
(615) 343-9867

or

Dr. Philip McCabe
University of Miami
Department of Psychology
P.O. Box 248185
Coral Gables, FL 33124

e-mail:
pmccabe@umiami.ir.miami.edu
phone:
(305) 284-4186



CHILDREN'S BRITTLE BONE FOUNDATION

FELLOWSHIP AWARDS:

The CBBF invites grant applications for fellowships to study the pathogenesis and treatment of osteogenesis imperfecta (OI). Appropriate research areas include therapeutic approaches to OI; regulation of collagen synthesis and bone growth and development. Preference will be given to applications focused on OI.

Funding Mechanism: Each grant will provide up to **\$50,000/year for two years**. This includes approximately \$35,000 in salary plus benefits and a research allowance. Indirect costs are not provided. Funding will begin July 1, 1999. The second year of funding is based on evidence of continued progress.

Eligibility Requirements: Applications may be submitted by domestic and foreign, non-profit and for-profit, public and private organizations. Applications from minority individuals and women are encouraged. Applicants should hold a MD and/or Ph.D. (or equivalent). It is expected applicants will be in post-doctoral training or hold a junior faculty position. If The applicant is a postdoctoral fellow, a letter of support from the preceptor along with evidence of the preceptor's external funding for related scientific research is required with the full application.

APPLICATION PROCESS:

Completed original applications must be delivered to the CBBF (c/o Dr. Matthew D. Breyer, Division of Nephrology, Vanderbilt University) by November 3, 1998. Awardees will be notified by February 1, 1999. Applications for the OI Treatment Challenge should use the CBBF challenge application forms. Fellowship award applications should use the fellowship application form. Both will be available after September 1, 1998 from: **Children's Brittle Bone Foundation**
PO Box 27
Highland Park, IL 60035
Fax (847) 433-4982

FACULTY POSITION MOLECULAR CARDIOLOGY PROGRAM

The Molecular Cardiology Program at the University of Chicago invites applications for a tenure-track position at the Assistant or Associate Professor level. The successful candidate has an M.D. and/or Ph.D with research experience in the areas of molecular and cellular biology, developmental biology and/or human and mouse genetics. Applicants should submit a curriculum vitae, summary of research accomplishments, and three letters of recommendation to: **Jeffrey M. Leiden, M.D., Ph.D., Molecular Cardiology Search Committee, The University of Chicago, 5841 S. Maryland, MC 6080, Room B608, Chicago, IL 60637.**



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Vertex Pharmaceuticals
Incorporated, a publicly owned pharmaceutical company in Cambridge, is engaged in the discovery, development and commercialization of pharmaceuticals for the treatment of diseases for which there are currently limited or no effective treatments. The Company is concentrating on the discovery and development of drugs for the role in the treatment of many diseases including cancer multi-drug resistance, inflammation, and HIV infection and AIDS.

▲ POST-DOCTORAL FELLOW

We are seeking an individual to design and perform laboratory research on the regulation of caspases-intracellular proteases that are activated during programmed cell death. You will implement a basic research project that supports Vertex' ongoing drug design efforts for caspase inhibitors, and will help to identify new upstream and downstream targets for potential drug design programs. You will set up cellular and in vivo assays for apoptosis, and use these assays to study and identify regulatory molecules that modulate caspase activity and programmed cell death.

Successful candidates will have a Ph.D. in Molecular Biology or Biochemistry, or related discipline and Doctoral research performed on a related research problem. 5 years of laboratory research experience Post-Bachelor's degree is required. A solid publication record is essential. Laboratory proficiency in molecular biology, protein chemistry/enzymology and tissue culture methods is required. Candidates with prior post-doctoral experience will be considered only if the candidate has additional highly relevant experience to the position. **Job Code: 900-31**

Please submit cover letter and resume on-line (preferred method), to: www.vpharm.com/jobs, or to: Recruiting Manager, Vertex Pharmaceuticals, Job Code: _____, 130 Waverly Street, Cambridge, MA 02139; Fax: (617) 577-6645. Scannable resumes should be forwarded on plain white bond paper, using standard types and fonts, and no bold or italic print.

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POSITIONS OPEN

FACULTY POSITION THE UNIVERSITY OF TEXAS M. D. ANDERSON CANCER CENTER Department of Molecular Genetics

Applications are invited for a tenure-track position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. We are seeking applications from outstanding individuals with research interests in, but not limited to, cell cycle regulation, molecular and genetic mechanisms of gene regulation and cellular differentiation, cell-cell interactions, and regulation of signal transduction pathways to complement existing faculty research interests ([website: http://www.mdacc.tmc.edu/~transgen](http://www.mdacc.tmc.edu/~transgen)). Individuals utilizing eukaryotic genetic model systems are encouraged to apply. Interested individuals should send a curriculum vitae, a description of research interests, and the names, addresses, and telephone numbers of three references to:

Dr. Richard Behringer
Department of Molecular Genetics, Box 45
The University of Texas
M. D. Anderson Cancer Center
1515 Holcombe Boulevard
Houston, TX 77030

The initial review of applications will begin October 15, 1998.

MDACC is a smoke-free environment. An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

TWO FACULTY POSITIONS IN PHARMACEUTICS Department of Pharmaceutical Sciences Medical University of South Carolina

The Department of Pharmaceutical Sciences, College of Pharmacy, Medical University of South Carolina (MUSC) invites applications for two tenure-track faculty positions at levels commensurate with experience. (1) Industrial pharmaceuticals: research in pharmaceutical technology/biotechnology or drug delivery. (2) Pharmacokinetics: research in pharmacokinetics/pharmacodynamics, drug transport, or drug metabolism at the molecular or cellular level. The selected individuals will have earned doctorates in the pharmaceutical sciences or closely related disciplines and be expected to establish strong, independent extramurally funded research programs, teach in the Pharm.D. and Ph.D. curricula, and serve as mentors for graduate students. The university's rapid growth in biomedical research provides numerous opportunities for collaboration. Please send applications to: **Jaymin Shah, Ph.D., Department of Pharmaceutical Sciences, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425-2303.** Include curriculum vitae, representative publications, one- to two-page description of research plans, and list of references with telephone numbers. MUSC is an Equal Opportunity/Affirmative Action Employer.

PENN STATE UNIVERSITY DEPARTMENT OF CHEMISTRY

The Department of Chemistry at the Pennsylvania State University has several **TENURE-TRACK FACULTY POSITIONS** available for fall 1999. Appointees are expected to establish an exceptionally strong and highly visible research program that incorporates excellence in undergraduate and graduate education. We encourage applications from candidates in all areas of chemistry, including those that interface with other disciplines such as environmental, materials, and biological sciences. Applicants should submit a curriculum vitae, a list of publications, research plans, and arrange to have three letters of recommendation sent to: **Chair of the Search Committee, Box S, Department of Chemistry, 152 Davey Laboratory, Penn State University, University Park, PA 16802.** An Affirmative Action/Equal Opportunity Employer.

The Oregon Health Sciences University School of Medicine is seeking applicants for the position of **CHAIR** of its Department of Behavioral Neuroscience. Candidates should have achieved national recognition as an educator and scientist with proven leadership qualities. Please submit a statement of career goals, curriculum vitae, and at least five references to: **Kent L. Thornburg, Ph.D., L102, Oregon Health Sciences University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201-3098.** OHSU is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITIONS STANFORD UNIVERSITY SCHOOL OF MEDICINE Department of Genetics

The Department of Genetics at the Stanford University School of Medicine is seeking qualified applicants for tenure-track positions at the **ASSISTANT PROFESSOR** level.

The Department is moving into newly renovated laboratories and has established programs in genetic studies of a wide variety of eukaryotic and prokaryotic organisms.

Candidates should have a strong record of research accomplishment in any field of genetics, and should expect to become involved in teaching human and/or general genetics to medical students and graduate students.

Candidates should send their curriculum vitae, bibliography, statement of research interests, and the names of three references to: **Dr. David Cox, Search Committee Chairman, c/o Louann Kosmerl, Department of Genetics, School of Medicine, Stanford University, Stanford, CA 94305-5120.**

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

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER FACULTY POSITIONS

The Department of Molecular Biology and Oncology at the University of Texas Southwestern Medical Center invites applications for **TENURE-TRACK** faculty positions in the areas of cell cycle, gene regulation, differentiation, and development. We are seeking interactive individuals to join a new department with strengths in developmental biology, molecular biology, and genetics. Successful applications should be capable of establishing a vigorous independent research program and teaching in one of several active graduate programs. Submit a curriculum vitae, a statement of future objectives, and names of three references to:

Eric N. Olson, Chairman
Department of Molecular Biology and Oncology
University of Texas
Southwestern Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75235-9148

An Equal Opportunity Employer.

HEAD, NEW DEPARTMENT OF PLANT SCIENCES MONTANA STATE UNIVERSITY

Plant sciences department seeks dynamic individual to lead strongly interactive 26 tenure-track and 10 research faculty. Annual expenditures of \$5 million supports strong research, teaching, and extension programs in plant pathology, plant biology, plant genetics, crop science, and horticulture; B.S., M.S., and Ph.D. programs with 140 undergraduate and 30 graduate students; state-of-the-art laboratory and plant-growth facilities with a new agricultural biosciences facility. Requires a doctorate in plant sciences or related field; academic qualifications for appointment as Associate or Full Professor. Must request complete application materials from: **Sarah Briggs, Plant Sciences Department, 513 Leon Johnson Hall, Bozeman, MT 59717-3140. Telephone: 406-994-4833; FAX: 406-994-1848; e-mail: zpl7001@montana.edu.** Screening begins October 5, 1998. ADA/Equal Opportunity/Affirmative Action/Veterans Preference.

FACULTY POSITION PLANT BIOCHEMIST TEXAS TECH UNIVERSITY Lubbock, Texas

The Department of Chemistry and Biochemistry invites applications for a tenure-track position in plant biochemistry and/or plant molecular biology. While the specific area of research is not critical, we are especially interested in candidates who will complement our existing research programs in protein structure and function, mechanistic enzymology, photosynthesis, and phytoplids. Interested individuals should submit, by October 15, 1998, a curriculum vitae, selected reprints, statement of research interest, and arrange to have letters of recommendation sent to: **Professor W. David Nes, Department of Chemistry and Biochemistry, Texas Tech University, MS 1061, Lubbock, TX 79409-1061.** TTU is an Equal Opportunity/Affirmative Action Employer and encourages applications from minorities and women.

POSITIONS OPEN

The Department of Chemistry of the University of Wisconsin-Madison invites applications for one or more faculty positions to begin in fall of 1999. We seek outstanding candidates at the **ASSISTANT PROFESSOR** level (tenure-track) in all areas of chemistry. A senior hire (tenured **ASSOCIATE** or **FULL PROFESSOR** level) in inorganic or organic chemistry is also possible. Candidates for Assistant Professor must have a Ph.D. in chemistry or a related field; postdoctoral experience is desirable. The Assistant Professor position requires development of an internationally recognized program of scholarly research as well as excellent teaching at both the undergraduate and graduate level. Please send a curriculum vitae and a concise description of research plans and arrange for three letters of recommendation to be sent to: **Prof. James C. Weisshaar, Chair of Faculty Search Committee, Department of Chemistry, University of Wisconsin-Madison, Madison, WI 53706-1396.** To guarantee full consideration, all materials must arrive before October 1, 1998. At the senior level, we invite truly distinguished Inorganic and Organic Chemists to send a letter of application and a curriculum vitae. Unless confidentiality is requested in writing, information regarding the identity of the applicant must be released on request. Finalists cannot be guaranteed confidentiality. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer; applications from qualified women and minority candidates are encouraged.

FACULTY IN HUMAN GENETICS CHILDREN'S HOSPITAL RESEARCH FOUNDATION Cincinnati, Ohio

Unique opportunities in expanding Program of Human Genetics, emphasizing gene discovery and complex genetic traits.

Gene discovery: **ASSOCIATE/FULL PROFESSOR**. M.D. or Ph.D. with established research program to expand genomics core and research in complex traits.

Genetics of lipid disorders: **ASSISTANT/ASSOCIATE PROFESSOR**. M.D. or M.D.-Ph.D. to join expanding clinical/research activities in human genetics and lipid disorders.

Send curriculum vitae, bibliography to: **Gregory A. Grabowski, Director, Division and Program in Human Genetics, Children's Hospital Medical Center, Division of Human Genetics, 3333 Burnet Avenue, PAV 3-52, Cincinnati, OH 45229-3039.** CHMC is an Equal Opportunity Employer.

Department of Chemistry and Biochemistry, University of Maryland at College Park (UMCP) seeks to expand its Biochemistry Division by eight to nine faculty members over the next four years. Applications for these tenure-track or tenured positions are invited. Candidates at all levels will be considered (**ASSISTANT, ASSOCIATE, or FULL PROFESSOR**). Successful candidates will also have the opportunity to participate in the newly established Center for Biomolecular Structure and Organization and the campus-wide graduate program in molecular and cell biology. Submit a curriculum vitae, brief (three to five pages) description of research plans, and arrange for three letters of reference to be sent to: **Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742-2021.** Review of applications will begin immediately and continue until positions are filled. UMCP encourages applications from women and members of minority groups and is an Equal Opportunity/Affirmative Action Employer.

TENURE-TRACK ASSISTANT/ ASSOCIATE PROFESSOR

The University of Illinois College of Medicine at Rockford seeks to add one or two tenure-track faculty to its diversified Department of Biomedical Sciences. Rank will depend on qualification and experience. One of the candidates should have a Ph.D. in pharmacology with teaching experience. The successful applicants will be expected to develop an independent, extramurally funded research program and participate in the teaching of a team-taught course in medical pharmacology. Submit curriculum vitae, a short statement of research interests, and the names and addresses of three references to: **Dr. Fu-Li Yu, Ph.D., Department of Biomedical Sciences, University of Illinois College of Medicine at Rockford, 1601 Parkview Avenue, Rockford, IL 61107-1897.** Applications will be reviewed starting October 1, 1998. The University of Illinois is an Equal Opportunity/Affirmative Action Employer.

Postdoctoral Position: Cardiovascular Imaging in the Transgenic Mouse

The National Heart, Lung, and Blood Institute is developing an interdisciplinary program for imaging the cardiovascular system of transgenic mice. This program is being sponsored by several laboratories in the Institute including the Laboratory of Cardiac Energetics, Cardiology Branch and Laboratory of Molecular Cardiology. This program is developed to the adaptation and development of imaging methodologies to non-invasively phenotype mice with a variety of genetic defects. The program has facilities for high-resolution magnetic resonance imaging, ultrasound, nuclear and optical imaging. Training and experience in using these approaches for the study of mice at various stages of development will be part of the program. Projects include high spatial resolution studies of adult, neonatal, and fetal mouse cardiac function, perfusion, and vascular anatomy. The overall goal of this project is to develop a better understanding of the effects of specific genetic manipulations on the development and function of the cardiovascular system in mice. Experience in any of these imaging modalities, as well as experience in cardiac physiology/cardiology, is desirable. Ph.D. or M.D. required. Salary will be commensurate with experience. Please submit curriculum vitae to: **Dr. Robert S. Balaban, National Institutes of Health, 10 Center Drive, MSC 1061, Bldg. 10, Room B1D-161, Bethesda, MD 20892-1061. NIH is an Equal Opportunity Employer.**

Lilly Neuroscience

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Innovation at Lilly is supported by the best scientific minds and a visionary company with a 120 year-plus reputation of constantly striving for excellence. Our researchers are committed to discovering breakthrough therapies that help people all over the world lead healthier, happier lives. It is, quite simply, a dedication to improving lives and restoring hope.

BS/MS ELECTROPHYSIOLOGISTS

We have positions available for electrophysiologists in **Indianapolis** as well as at our research facilities near **London, UK**. These positions require a background in neuropharmacology or related fields and experience performing in vivo or in vitro electrophysiology studies. Experience with hardware and software applications, a knowledge of small animal surgery (including stereotaxic surgery) and cell isolation or cell culture is preferred.

For confidential consideration, please send your resume and cover letter indicating the position and location of interest to: **Eli Lilly and Company, Neuroscience Group ADSCMPH28, DC1818, Lilly Corporate Center, Indianapolis, IN 46285**. We are an equal opportunity employer dedicated to diversity and the strength it brings to the workplace. For other opportunities at Eli Lilly and Company, please contact our Job Bank at: <http://www.lilly.com>

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SOFAMOR DANEK the Spine Specialist

Sofamor Danek is a rapidly growing worldwide leader in Spinal and Neurosurgical medical specialties. Sofamor Danek is a publicly owned company primarily involved in developing, manufacturing, and marketing devices, instruments, computer-assisted visualization products, and biomaterials used in the treatment of spinal and cranial disorders.

PROJECT MANAGER

This individual will manage the overall development of a biological product used in bone repair and regeneration. Sofamor Danek is developing a novel gene that has been shown to induce new bone formation. This gene has the potential to be useful in spinal fusions and bone repairs.

This position requires managing and coordinating all aspects of this product, including directing and overseeing basic and applied research being conducted at University and Contract laboratories, interfacing with Contract manufacturing facilities, and assisting in preparation of applications to governmental regulatory agencies.

We are seeking only highly motivated individuals with a Ph.D. in Molecular Biology or similar scientific-related field and at least 5 years of work experience, preferably with a biologic/drug/gene therapy company. You must possess a working knowledge of gene production, delivery methods, expression, and analytical methods. This individual must have excellent organizational and communication skills with hands-on experience in the development of gene therapy applications.

If you meet these criteria and are looking to provide leadership in a team environment with a rapidly growing company, for confidential consideration please send your résumé, letters of reference, salary history/requirements to:

Sofamor Danek, 1800 Pyramid Place, Memphis, TN 38132.

Fax: 901-344-1555

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Mathematical Modeling

The Edwin L. Steele Laboratory (MGH/HMS) is committed to improving detection and treatment of cancer through a better understanding of tumor pathophysiology and barriers to delivery of therapeutic agents. We are actively recruiting for two faculty positions at the Instructor or Assistant Professor level to work in the areas of **angiogenesis, transvascular transport, metabolic microenvironment, interstitial transport, or cell transport**.

Individuals must possess a Ph.D. and/or M.D., research experience, strong organizational, interpersonal, communication, and computer skills and be prepared to work in a dynamic team environment. A minimum of two years postdoctoral experience is required. Applicants should send a C.V. indicating their area of expertise, a career statement and three reference letters to: **Rakesh K. Jain, Department of Radiation Oncology, Massachusetts General Hospital, Boston, MA 02114.**



For more information about the research activities of the Steele Laboratory, please visit our web site at

<http://steele.mgh.harvard.edu/steele/positions.html>

The Massachusetts General Hospital is an Affirmative Action/Equal Opportunity Employer. Applications from women and members of minority groups are encouraged.

POSITIONS OPEN

The Department of Microbiology at The Ohio State University invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. Innovative scientists are sought, with postdoctoral experience and documented evidence of productive high-quality research, who apply modern molecular biology techniques to study infectious disease or host-pathogen interactions. Current Department strengths emphasize bacterial systems, but outstanding applicants studying viral, fungal, or protozoal pathogenesis will be given serious consideration. Ideal applicants will have a research program and expertise that complement established faculty interests, which include cell signaling, the immune response, *in vivo* gene expression, genome analysis, and microbial physiology in host-pathogen interactions. Successful applicants will be expected to establish an extramurally funded, productive research program and to participate in both undergraduate and graduate-level teaching. This is an excellent opportunity to join an expanding research group within a very productive, interactive Department of Microbiology with a strong Ph.D. program. A competitive salary, excellent research space, and start-up resources are available. To ensure full consideration, applicants should submit a curriculum vitae, summary of future research plans, and the names of three referees by November 1, 1998, to: **Dr. K. Mark Coggeshall, Chair of Search Committee, Department of Microbiology, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210. Website: <http://www.biosci.ohio-state.edu/~microbio>.** *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Women, members of minority groups, Vietnam-era veterans, and individuals with disability are strongly encouraged to apply.*

Applications are invited for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level in the Department of Microbiology at The Ohio State University. We seek applicants with postdoctoral experience, documented evidence of high-quality research, and a strong commitment to teaching and research at a major research university. The successful candidate will be expected to establish a productive, independent research program with extramural support, to teach at the undergraduate level, supervise Ph.D. students, and participate in graduate education. Preference will be given to applicants with research expertise and a planned research program that emphasizes molecular approaches to microbial diversity, metabolic engineering, or environmental microbiology. A competitive salary, excellent research space, and substantial start-up resources are available. Applicants should send a curriculum vitae, summary of research plans, and the names of three referees to: **Dr. Kathleen E. Kendrick, Chair, Search Committee, Department of Microbiology, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210. Website: <http://www.biosci.ohio-state.edu/~microbio/microbio.html>.** The Department guarantees full consideration for all applications received by November 1, 1998. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Women, members of minority groups, Vietnam-era veterans, and individuals with disability are strongly encouraged to apply.*

Tenure-track faculty positions, Department of Bioengineering, The University of Utah. Applications are invited for two tenure-track positions at the **ASSISTANT/ASSOCIATE PROFESSOR** level in the general areas of applied neurosciences, biomechanics, chemical engineering, and/or materials science. Highly qualified applicants in other areas of bioengineering will also be given full consideration. Candidates must have a doctorate degree, a strong engineering background, an excellent research record, a commitment to undergraduate/graduate education, and a genuine interest in fostering interdepartmental collaborations. Applications are particularly encouraged from individuals who have experience in working with and advising students from diverse gender and ethnic backgrounds.

Interested individuals should submit a complete curriculum vitae, names and addresses of three references, and a short description of current research activities, teaching experience, and career goals to: **Faculty Search Committee, Department of Bioengineering, 50 South Central Campus Drive, Room 2480, Salt Lake City, UT 84112-9202. Telephone: 801-581-8528; FAX 801-585-5361.** Applications will be accepted until November 15, 1998, or until suitable candidates are selected.

The University of Utah, an Affirmative Action/Equal Opportunity Employer, encourages applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.

POSITIONS OPEN

MICROBIOLOGISTS, ASSISTANT PROFESSORS. The Department of Veterinary and Microbiological Sciences at North Dakota State University invites applications for two tenure-track faculty positions, one oriented toward research and instruction and the other focused on veterinary diagnostic microbiology. The successful candidate for the research/instructional position will be expected to establish an active, independent research program in food safety as it relates to microbial pathogens of food animals, teach an undergraduate course, develop a graduate-level course, and mentor graduate and undergraduate students. Candidates for this position must have a Ph.D. in an infectious disease field, evidence of recent research accomplishments, a commitment to excellence in teaching, and excellent oral and written communication skills. Postdoctoral research and teaching experience and evidence of grantsmanship are preferred. Inquiries about this position or application materials should be directed to **Lisa K. Nolan, D.V.M., Ph.D.** (see below). The Veterinary Diagnostic Microbiologist will supervise the laboratory's diagnostic microbiology, serology, and virology sections, interpret and communicate case results, consult with laboratory clientele, develop quality assurance/quality control programs, expand the laboratory's diagnostic services, develop an active research program, and participate in the departmental teaching program. Candidates for this position must have a D.V.M. (or equivalent) and/or Ph.D. degree, advanced training or experience in diagnostic microbiology, and excellent communication and supervisory skills. Expertise in diagnostic virology and serology is preferred. Inquiries about this position or application materials should be directed to **Neil W. Dyer, D.V.M., M.S.** (see below). Review of applications for both positions will begin September 15, 1998, and will continue until positions are filled. Competitive salaries, excellent technical assistance, and generous start-up funds await the successful candidates. Interested individuals should send letter of application, curriculum vitae, statements of teaching and research philosophies, and names, addresses, and telephone numbers of at least three referees to: **Dr. Nolan or Dr. Dyer** (as appropriate), **Department of Veterinary and Microbiological Sciences, North Dakota State University, Fargo, ND 58105.** For further information, please contact: **Dr. Nolan or Dr. Dyer, Telephone: 701-231-7511; FAX: 701-231-7514; e-mail: nolan@plains.nodak.edu or ndyer@prairie.nodak.edu; or consult our website: <http://www.ndsu.nodak.edu/instruct/devold/vetmicro/>.** *NDSU is an Equal Opportunity Employer.*

TROPICAL RESOURCE SCIENTIST SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES Yale University

A junior faculty position is available for a Tropical Resource Scientist with management interests at the **ASSISTANT PROFESSOR** level at the Yale School of Forestry and Environmental Studies. A doctoral degree is required. An individual with strong grounding in natural resource sciences and with an active applied research program in the tropics is desirable. This individual should be interested in research issues in which the social and natural science fields interface, in human-impacted ecosystems, or in the role of humans in managing tropical forest resources. Examples of possible research emphases are forest ecology, silviculture, forest management, soils, agroforestry, plantation forestry, human environmental interactions, ethnobotany, conservation genetics and biodiversity, and protected area management. Teaching is expected to include a graduate-level course in tropical resource ecology and management and a graduate course in the individual's area of specialty. Applications are welcome from individuals working in all tropical areas.

Applicants should send by October 1, 1998, their curriculum vitae, a statement of their research and teaching interests, a list of three references, and three representative examples of their publications to: **Professor Kristina Vogt, Chair, Tropical Resource Scientist, School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, CT 06511.** Additional information on this position can be obtained by contacting **Professor Vogt, Telephone: 203-432-5076; e-mail: kristina.vogt@yale.edu or Valerie Petersen, Special Assistant to the Dean, Telephone: 203-432-5109; e-mail: valerie.petersen@yale.edu.**

Yale is an Equal Opportunity Employer. Minorities and women are encouraged to apply.

POSITIONS OPEN

NORTHERN ARIZONA UNIVERSITY ENVIRONMENTAL POLITICS AND SCIENCES

The Center for Environmental Sciences and Education and the Department of Political Science at Northern Arizona University solicit applications for a full-time, tenure-track, entry-level **ASSISTANT PROFESSOR** position in environmental sciences and politics, to begin in August 1999. The position is a joint appointment between College of Arts and Sciences (CESE) and College of Social and Behavioral Sciences (Political Science).

Minimum requirements include a Ph.D. completed by August 1, 1999; scholarly and research interests in environmental politics, policy, and/or administration, with a specific concentration in conservation or natural resource policy, science and technology policy, international environmental policy, or issues of diversity in environmental policy; the ability to teach courses in environmental administration and policy; and the ability to teach introductory core courses in environmental sciences, often in collaboration with other CESE and Political Science faculty members. Additionally, the successful applicant will develop and teach undergraduate and graduate courses in her/his specialty.

Preference will be given to candidates with formal training in the natural sciences and/or practical experience in the realm of environmental policy, a commitment to teaching and advising in a multicultural setting, interest in incorporating instructional technology into their teaching, and a potential to develop grant proposals to external funding agencies centered on environmental themes. The successful candidate will be the primary advisor for the environmental policy and administration emphasis of our Environmental Sciences Program, and preference will be given to those demonstrating a capability as an internship coordinator of upper-division students.

The 19-member Political Science department offers the B.A., B.S., M.A., M.P.A., and Ph.D. degrees; the interdisciplinary Environmental Sciences Program offers a B.S. in eight emphasis areas. Northern Arizona University, with 19,000 students, is located on the Colorado Plateau, in a mountain community of over 50,000 people. Its mission includes a strong commitment to environmental education at all levels.

Application requirements include submission of a curriculum vitae, transcripts, three original letters of reference, evidence of scholarship and publication, syllabi and teaching evaluations, and a cover letter that explains the applicant's interest in the position. The review of applications will commence October 15, 1998, and will continue until the position is filled. Please send applications to: **Chair, Environmental Politics Search Committee, Northern Arizona University, Department of Political Science, Box 15036, Flagstaff, AZ 86011-5036.**

Given the increasing ethnic diversity of the population of Arizona and the Southwest, the Department of Political Science and the Center for Environmental Sciences and Education encourage applications from individuals with a commitment to creating a supportive educational environment for students from all ethnic, racial, and cultural backgrounds. *Northern Arizona University is a committed Equal Opportunity/Affirmative Action institution. Minorities, women, persons with disability, and veterans are encouraged to apply.*

Marymount University (MU) invites applications for an **ASSISTANT PROFESSOR** of biology and physical sciences, beginning August 1999. Candidate should be a general Biologist with field biology experience and interest in Secondary School Teacher preparation and/or interdisciplinary teaching. Ph.D. must be completed prior to start of employment; postdoctoral experience and some teaching experience preferred. It is expected that faculty, in addition to teaching, assume responsibilities for academic advising, curriculum development, committee service, research, and professional scholarship. Review of applications begins November 15, 1998, and continues until position is closed/filled. Marymount is an independent, Catholic university enrolling students in undergraduate and graduate programs. The University is located in residential Arlington, Virginia, ten minutes from Washington, D.C. For official application contact: **Personnel, Telephone: 703-284-1680; e-mail: personnel@marymount.edu; TDD: 703-284-1516.** Official application must include letter of application, completed MU application form, curriculum vitae and at least three letters of reference. Send all application materials to: **Personnel, Marymount University, 2807 North Glebe Road, Arlington, VA 22207, Attn: Position #F-53.** *Current authorization to work in the United States required.*



POSTDOCTORAL FELLOWSHIP in Molecular Genetics of Phospholipid Metabolic Enzymes. Laboratory of Neurosciences at the National Institute on Aging, National Institutes of Health (NIH), Bethesda, MD, seeks a broadly trained molecular biologist/geneticist to examine gene regulation of enzymes involved in brain phospholipid fatty acid metabolism. Position requires in-depth knowledge of molecular genetic techniques involving general knockout methods, cloning, Northern and Southern blot analysis, *in situ* hybridization, quantitative PCR, and demands experience working with genomic DNA. Requirements: Ph.D. within last 5 years. Send CV, letters, and pertinent reprints to: **Dr. Stanley I. Rapoport, Laboratory of Neurosciences, NIA, Bldg. 10, Room 6C103, NIH, Bethesda, MD 20892-1592; FAX 301-402-0074; e-mail sir@helix.nih.gov. NIH is an Equal Opportunity Employer.**

Postdoctoral Research at McGill University

Postdoctoral positions are available immediately to work on the identification and molecular characterization of genes regulating growth and life span in the nematode *Caenorhabditis elegans* and in vertebrates. Refer to the following papers: Wong et al., 1995, **Genetics** 139:1247; Lakowski and Hekimi, 1996, **Science** 272:1010; Ewbank et al., 1997, **Science** 275:980; and Hekimi et al., 1998, **Trends Genet.** 14:14. Candidates must possess demonstrated skills in molecular biology.

Apply by e-mail to Dr. Siegfried Hekimi at hekimi@notung.biol.mcgill.ca or by fax at 514-398-1674. Written applications can be sent to: **Anne Wong, Department of Biology, 1205 Dr. Penfield Avenue, Montreal, Quebec H3A 1B1 Canada.** Applications should include a CV and names of 3 referees.

Research Opportunities/ Postdoctoral

Mount Sinai School of Medicine leads the way in medical education and research. Under the leadership of a new Dean, we are in the midst of substantial growth in all of our research and core facilities. This provides unique opportunities for dedicated professionals in the following areas:

Structural Biology

A postdoctoral position is available in a Structural Biology laboratory focusing in the molecular mechanisms of mitogenic signal transduction. This position entails projects involving structure determination by multidimensional NMR and biochemical characterization of mitogen-activated protein kinases (MAPKs) and MAPK phosphatases (MKPs). Candidates must be highly motivated and should have experience in molecular biology and protein chemistry or protein NMR spectroscopy. Expertise in enzymology is desirable. Reply to: **Ming-Ming Zhou,**

Ph.D., Structural Biology Program, Department of Physiology and Biophysics, Box 1677. Fax: 212-849-2456. E-mail: zhoum@inka.mssm.edu

Cytokine Gene Regulation and Signal Transduction

The newly-created Immunobiology Center has two postdoctoral positions available to study cytokine gene regulation and signal transduction. Experience with signal transduction and transcriptional regulation is desirable, but not mandatory. Applicant should have a demonstrated background in all aspects of modern molecular biology and biochemistry, as well as communication and analytical skills. These include: **1.** This position will concentrate on novel aspects of the JAK-STAT signaling pathway in transcriptional control and cell growth regulation. Reply to: **Dr. Curt Horvath, Immunobiology Center, Box 1630. E-mail: horvac01@doc.mssm.edu**

2. This position will focus on the molecular regulation of interleukin-12 gene expression, signal transduction and Th1/Th2 differentiation. Reply to: **Dr. Scott Plevy, Immunobiology Center, Box 1630. E-mail: scott_plevy@smtplink.mssm.edu**

Differentiation Inducers and Histone Deacetylase Inhibitors

This immediate postdoctoral position is responsible for characterizing the structure and mechanism of recently identified highly active differentiation inducers. A related study is the development of targeted histone deacetylase inhibitors as anti-cancer agents. Experience in molecular pharmacology essential; training in transcriptional regulation preferred. Reply to: **Dr. Samuel Waxman, Department of Medicine, Box 1178. Fax: 212-996-5787. E-mail: waxman@msvax.mssm.edu**

Computational Molecular Biophysics

We are seeking two candidates for postdoctoral positions who are interested in the following:

1. Investigation of structure-function relationships of transmembrane proteins, including G protein-coupled receptors and neurotransmitter transporters in their membrane environments.
2. Investigation of the structural dynamics of protein-DNA interactions involved in mechanisms of gene expression. The research involves multidisciplinary teams in experiment and theory, and focuses on molecular dynamics simulations and quantum chemical calculations using excellent computational facilities. Applicants should have a strong background in theoretical biophysics and/or biophysical chemistry. Reply to: **Dr. Harel Weinstein, Dept. of Physiology and Biophysics, Box 1218. E-mail: hweinstein@inka.mssm.edu**

Cancer Genetics

The Department of Human Genetics has immediate Postdoctoral and Research Assistant positions available to identify and characterize genes involved in hereditary cancer syndromes. Candidates must have excellent working experience in molecular biology and the desire to work in a multidisciplinary environment supported by extensive core facilities. Reply to: **John A. Martignetti, M.D., Ph.D., Dept. of Human Genetics, Box 1498, Fax: 212-360-1809. E-mail: jam@msvax.mssm.edu**

We offer excellent benefits and exciting, professional challenges. Please forward your curriculum vitae including a brief description of research experience, names, e-mail addresses and telephone numbers of three references to the appropriate contact either to the fax or e-mail (if provided) or mail indicating proper department and box number of the position of interest to: **Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574.** For more information, please visit our website at: www.mssm.edu We are an equal opportunity employer fostering diversity in the workplace.

The Mount Sinai School of Medicine

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO DEPARTMENT OF PHARMACOLOGICAL AND PHYSIOLOGICAL SCIENCES

The University is making a significant commitment to the development of outstanding programs in cellular and molecular neurobiology under the direction of **Sangram S. Sisodia**. The Neurobiology Search Committee is inviting applications from established Investigators for tenured positions at the **ASSOCIATE PROFESSOR** or **PROFESSOR** levels. The successful candidates will join a multidisciplinary department composed of 22 primary and 10 secondary faculty members whose research interests cover the areas of neurobiology of disease, developmental neurobiology, neuropharmacology, membrane receptors, signal transduction and second messenger mechanisms, membrane transport, structure and function of ion channels, vestibular and systems physiology, cytoskeleton, secretory pathways, and cell growth regulation. Although applications in all areas of neurobiology are welcomed, we are particularly interested in candidates working in developmental neurobiology; neuronal vesicular trafficking; molecular determinants of neuronal plasticity; neuron-glia/neuron-muscle interactions; trophic/cytokine signaling mechanisms; and transgenic/knockout models of neurodegeneration and neurodegenerative diseases. The successful candidate will be required to teach in appropriate undergraduate, graduate, and medical school courses. Applicants should provide a brief statement of research interests and plans, curriculum vitae and bibliography, and the names of three individuals who are willing to write letters of recommendation to:

Dr. Sangram Sisodia
Neurobiology Search Committee
The University of Chicago
Department of Pharmacological and
Physiological Sciences
947 East 58th Street
Chicago, IL 60637

From the time of its original charter, the principle of the University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin.

ASSISTANT PROFESSOR UNIVERSITY OF SAN DIEGO

The University of San Diego (USD), Department of Biology, invites applications for a new faculty position beginning in September 1999. The University seeks applicants with expertise in immunology to offer an upper-division course with laboratory, and to participate in other upper-division and lower-division courses for biology majors. USD is an independent Catholic university whose primary aim is teaching excellence. Active scholarship is integral to this aim, and the candidate is expected to have an ongoing research program that has the potential for undergraduate involvement. Applicants should submit a curriculum vitae, a brief statement of teaching philosophy and research interests, and the names, addresses, and telephone numbers of three referees by October 15, 1998, to: **Chair, Department of Biology, University of San Diego, 5998 Alcalá Park, San Diego, CA 92110-2492**. Additional information about the University can be found at our website: www.acusd.edu. Women and minority candidates are encouraged to apply. USD is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT ATTENDING IN NUCLEAR MEDICINE

Memorial Sloan-Kettering Cancer Center is seeking a Board-certified Nuclear Medicine Physician for a position as Assistant Attending in nuclear medicine. The individual should have at least three years of experience in clinical nuclear medicine, demonstrated evidence of scholarly pursuits of clinical problems, and a commitment to teaching. PET experience is highly desirable. Please send inquiries to: **Steven M. Larson, M.D., Chief, Nuclear Medicine Service, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021**. Memorial Sloan-Kettering Cancer Center is an Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR OF MICROBIOLOGY THE UNIVERSITY OF IOWA

The Department of Microbiology and the Cancer Center, The University of Iowa College of Medicine, invite applicants to apply for a tenure-track faculty position at the Assistant or Associate Professor level. Outstanding candidates investigating human viruses that interact with the immune system or are involved in oncogenesis are encouraged to apply. All applicants must have a Ph.D. and/or M.D. degree, postdoctoral research experience, and a strong record of research accomplishments. Successful applicants are expected to establish an extramurally funded research program and to actively participate in the virology and viral oncology research programs. Applicants must be able to fully participate in departmental virology and viral oncology teaching assignments. The Department of Microbiology consists of 28 faculty members with research programs in virology, immunology, pathogenic bacteriology, microbial genetics, and microbial physiology. The Cancer Center overall has 110 faculty Investigators and six established research programs. The University has strong research programs in molecular virology, viral pathogenesis, and immunology. Research facilities of the Department of Microbiology have undergone complete renovation and The Cancer Center facilities are excellent. Applicants should send their curriculum vitae, a statement of research interests, and the names of at least three references before November 1, 1998, to:

Mark F. Stinski, Ph.D.
Search Committee Chair (F1551)
Department of Microbiology
3-403 Bowen Science Building
The University of Iowa
Iowa City, IA 52242

Anticipated start date is July 1, 1999.

The University of Iowa is an Equal Opportunity and Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

POSITION IN GENETICS ERINDALE COLLEGE University of Toronto at Mississauga

The Biology Group of the University of Toronto at Mississauga, Erindale College, invites applications for a full-time, tenure-track appointment in genetics at the **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** levels starting July 1, 1999. The successful candidate must have a strong background in genetic theory and methods and will be expected to develop an internationally recognized research program in any area of genetics. Teaching will include introductory genetics and participation in advanced undergraduate and graduate courses according to his/her area of specialization in genetics. Applicants must have a Ph.D. degree and postdoctoral experience is preferable. Salary will be commensurate with qualifications and experience.

Applications, including a curriculum vitae, brief statement of research interests, and three letters of reference, should reach: **Dr. J. B. Anderson, Genetics Search Committee, Biology Group, Erindale College, University of Toronto at Mississauga, Mississauga, Ontario L5L 1C6 Canada** by November 1, 1998.

In accordance with Canadian Immigration requirements, this advertisement is directed toward Canadian citizens and permanent residents of Canada. Also, in accordance with its Employment Equity Policy, the University of Toronto encourages applications from qualified women or men, members of visible minorities, aboriginal peoples, and persons with disability.

California Institute of Technology invites applications for a tenure-track position as **ASSISTANT PROFESSOR** in the field of organic chemistry. The initial appointment will be for four years. Exceptionally well-qualified applicants may also be considered at the **ASSOCIATE** or **FULL PROFESSOR** level. Outstanding candidates who have completed their Ph.D. and have a strong commitment to research and teaching excellence are encouraged to apply. Submit curriculum vitae, publication list, a description of proposed research, and three letters of recommendation to: **Professor R. H. Grubbs, Organic Chemistry Search Committee, M/C 164-30CR, California Institute of Technology, Pasadena, CA 91125**. Applications should be received by November 15, 1998. *The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.*

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO DEPARTMENT OF PHARMACOLOGICAL AND PHYSIOLOGICAL SCIENCES

The University is making a significant commitment to the development of outstanding programs in cellular and molecular neurobiology under the direction of **Sangram S. Sisodia**. The Neurobiology Search Committee is inviting applications for tenure-track positions in neurobiology at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. The successful candidates will join a multidisciplinary department composed of 22 primary and 10 secondary faculty members whose research interests cover the areas of neurobiology of disease, developmental neurobiology, neuropharmacology, membrane receptors, signal transduction and second messenger mechanisms, membrane transport, structure and function of ion channels, vestibular and systems physiology, cytoskeleton, secretory pathways, and cell growth regulation. Although applications in all areas of neurobiology are welcomed, we are particularly interested in candidates working in developmental neurobiology; neuronal vesicular trafficking; molecular determinants of neuronal plasticity; neuron-glia/neuron-muscle interactions; trophic/cytokine signaling mechanisms; and transgenic/knockout models of neurodegeneration and neurodegenerative diseases. The successful candidate will be required to teach in appropriate undergraduate, graduate, and medical school courses. Applicants should provide a brief statement of research interests and plans, curriculum vitae and bibliography, and the names of three individuals who are willing to write letters of recommendation to:

Dr. Sangram Sisodia
Neurobiology Search Committee
The University of Chicago
Department of Pharmacological and
Physiological Sciences
947 East 58th Street
Chicago, IL 60637

From the time of its original charter, the principle of the University of Chicago has been to appoint scholars without regard to race, color, religion, sex, or national origin.

The Department of Neurological Surgery and the Graduate Program in Neuroscience at the University of California, San Francisco seek an individual at the level of **ASSISTANT, ASSOCIATE, or FULL PROFESSOR** who is interested in basic mechanisms of cell injury or repair in the central nervous system. Applicants should have a Ph.D., M.D., or equivalent degree. This person would interact with existing programs in head trauma, cerebral ischemia, and spinal cord injury, would develop new programs on mechanisms and/or treatment, and would have or be expected to achieve a strong record in obtaining extramural funding. If you are interested, please send a curriculum vitae, statement of interests, and a list of three references to: **Dr. Linda J. Noble, Department of Neurological Surgery, University of California, San Francisco Medical Center, 505 Parnassus Avenue, San Francisco, CA 94143-0520**. UCSF is an Equal Opportunity/Affirmative Action Employer. The University undertakes Affirmative Action to assure Equal Opportunity for underutilized minorities and women, for persons with disability, and for Vietnam-era and special disabled veterans.

Wm. Jennings Bryan Dorn Department of Veterans Affairs Medical Center is recruiting an **ASSOCIATE CHIEF OF STAFF** for Research and Development. This individual will be responsible for oversight and promotion of the research efforts at the medical center and will hold a joint appointment at the University of South Carolina School of Medicine and the South Carolina Cancer Center. *Qualified candidates should be U.S. citizens and have an area of interest in both basic research and clinical trials related to the etiology and treatment of malignancies, especially prostate, colon, or lung.* The appropriate candidates may have either an M.D. or Ph.D. degree. Salary is commensurate with qualifications. Interested individuals should send a copy of their curriculum vitae to: **Dr. William G. Woods, Director, South Carolina Cancer Center, 7 Richland Medical Park, Columbia, SC 29203**. For more specific information Telephone: 803-695-6825. The Department of Veterans Affairs is an Equal Opportunity Employer.

UNIVERSITY OF LA VERNE FLETCHER JONES ENDOWED CHAIR IN BIOLOGY

The University of La Verne invites applications for the newly established Fletcher Jones Chair in Biology endowed by the Fletcher Jones Foundation and to begin in the fall of 1999. The University seeks applicants in the field of invertebrate zoology and parasitology with strengths in interdisciplinary courses. It is desirable that the candidate be able to teach General Biology, Developmental Biology, and electives in their field. The appointment will be made at the **ASSOCIATE** or **FULL PROFESSOR** level. Demonstrated excellence in undergraduate teaching is required. Responsibilities include directing Senior Projects and sustaining a personal program of research involving undergraduates. Send letter of application, curriculum vitae, and names of references to: **Director of Human Resources, University of La Verne, 1950 Third Street, La Verne, CA 91750.** Position #1906. Review of applicants will begin on November 1 and continue until the position is filled. *Equal Opportunity Employer.*

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If you share our belief that success can only be measured in human terms, we invite you to join us on our adventure of discovery.

Enhancing the quality of life. This is the commitment that Merck stands on and it's what has distinguished us as the world's premier developer, manufacturer and marketer of innovative health products. Come and work with us. Experience a collective effort admired by many, duplicated by none.

Merck Research Laboratories, a world leader in biological and pharmaceutical research, currently has the following position available at our **West Point, PA** facility.

VIROLOGIST JOB CODE: B-165

The successful candidate will have current knowledge of cellular and viral culture techniques and should be familiar with molecular cloning and immunological detection. Additionally, you will assist in the development of small animal models for virus-based gene therapy.

To qualify, a BS/MS degree or equivalent in virology, molecular biology or related field along with a minimum of 2 years' directly relevant laboratory experience is required.

An excellent salary and benefits program accompany this position at our modern research facility located 25 miles northwest of Philadelphia. For immediate consideration, please forward your curriculum vitae, resume with cover letter and the names of three references to: **Merck Research Laboratories, MRL Human Resources, WP42-2, indicate job code B-165, P.O. Box 4, West Point, PA 19486.** Only qualified candidates will be contacted. We are proud to be an equal opportunity employer. m/f/d/v

Visit our web site at: www.merck.com



Samuel Lunenfeld Research Institute of Mount Sinai Hospital Model Organism Genetics

The Samuel Lunenfeld Research Institute of Mount Sinai Hospital is seeking to appoint a principal investigator in the broad area of genetic analysis of non-mammalian organisms as models for understanding development and disease. This is an independent faculty-level position. The Institute is undertaking a major new research initiative in Models of Human Disease, building on its basic research strengths in genetics and development in mouse, *C. elegans*, and yeast, and in cell signaling and protein-protein interactions, to bridge with clinical research interests in the Hospital and the University. As part of this initiative, we are interested in strengthening our basic research base in model organism genetics. The successful candidate will be associated with the Program in Development and Fetal Health, and be cross-appointed to an appropriate department of the University of Toronto. Membership in the University Interdepartmental Program in Developmental Biology will facilitate interactions with other model organism researchers across the University. The Institute fosters and encourages problem-based collaborative and multidisciplinary research.

Applicants should send a curriculum vitae, a brief statement of future research interests and three letters of reference to **Dr. Janet Rossant, Chair, Search Committee, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, 600 University Avenue, Room 884, Toronto, Ontario M5G 1X5 Canada.** The deadline for receipt of applications is October 15, 1998.



Samuel Lunenfeld Research Institute of Mount Sinai Hospital Protein Function

The Samuel Lunenfeld Research Institute of Mount Sinai Hospital is seeking two principal investigators in the general area of protein function. These are independent faculty-level positions, associated with a new program in Proteomics and Bioinformatics. This group currently includes **T. Pawson** (signal transduction), **M. Tyers** (cell cycle), **F. Sicheri** (structural biology), and **C. Hogue** (bioinformatics) and occupies a newly constructed floor of the Research Institute.

Cross-appointment to a relevant Department at the University of Toronto is available. We are interested in excellent candidates in any of the following areas: protein chemistry (e.g., mass spectrometry, optical fluorescence spectroscopy), signal transduction, cytoskeleton, cell cycle, and bioinformatics. Applicants should send a curriculum vitae, a brief statement of future research interests, and three letters of reference to **Dr. Tony Pawson, Chair, Search Committee, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, 600 University Ave., Rm. 1084, Toronto, Ontario M5G 1X5 Canada.** The deadline for receipt of applications is October 15, 1998.

POSITIONS OPEN

ASSISTANT PROFESSOR. The Biochemistry and Cellular and Molecular Biology Department at the University of Tennessee at Knoxville seeks a Structural Biologist studying macromolecular structure and function for a tenure-track position as an Assistant Professor. The individual occupying this position would be part of a multidisciplinary university effort taking advantage of the neutron source at Oak Ridge National Laboratory (ORNL) for neutron scattering and crystallography as a complement to other analytical approaches. They would participate in the UTK/ORNL Joint Institute for Neutron Sciences. In addition to interactions with others recruited to take advantage of these tools, opportunities for professional interaction include a strong core of Structural Biologists in the department as well as at the University Hospital and the Life Sciences Division at Oak Ridge National Laboratory. Desired qualifications include experience with neutron scattering and/or crystallography, several years of postdoctoral training, evidence of significant scientific productivity and of the potential to develop and maintain a vigorous, independent, and extramurally funded research program. Teaching responsibilities will include effort at both the undergraduate and graduate level. For more information on the department visit the website: <http://utk-biowg.bio.utk.edu/bcmbdept.nsf>. Interested candidates should submit a résumé including research goals as well as teaching experience and goals and three letters of recommendation to: **Cynthia Peterson, Ph.D., Chair of the Search Committee, Biochemistry and Cellular and Molecular Biology Department, M407 Walters Life Sciences Building, University of Tennessee, Knoxville, TN 37996-0840.** Review of applications will begin on September 15, 1998, and will continue until the position is filled. *UTK is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer.*

ASSISTANT ADJUNCT PROFESSOR OF ANATOMY AND PHYSIOLOGY

The Departments of Anatomy and Physiology at University of California, San Francisco (UCSF) invite applications for Assistant Adjunct Professor. The successful candidate will serve as co-coordinator of gross anatomy dissection and lectures and will have documented excellence in the teaching of gross anatomy and organ systems physiology to medical, dental, and pharmacy students. A Ph.D. or M.D. or equivalent doctoral-level degree is required. Research experience (including a record of publication) that will bring a scientific perspective to the teaching is highly desirable.

To apply, send curriculum vitae and request that three letters of recommendation be sent to:

**Gross Anatomy and Systems Physiology
Search Committee
Department of Anatomy
University of California, San Francisco
513 Parnassus Avenue
Room S1364
San Francisco, CA 94143-0452**

All material should be received by August 15, 1998.

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

DEVELOPMENTAL BIOLOGIST UNIVERSITY OF ILLINOIS AT CHICAGO

The Department of Biological Sciences at the University of Illinois at Chicago (UIC) invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level.

We seek applications from individuals whose research program emphasizes molecular and genetic approaches to the understanding of development using plant, animal, or microbial model systems. Successful candidates will be expected to pursue a vigorous independent research program and to contribute to the department's undergraduate and graduate teaching efforts.

Review of applications will begin October 1, 1998, and will continue until the position is filled. Send a curriculum vitae, a brief summary of research plans, and at least three letters of recommendation to:

**Search Committee for Developmental Biologist
c/o Ms Isabel Stierle
Laboratory for Molecular Biology (m/c 567)
University of Illinois at Chicago
900 South Ashland Avenue
Chicago, IL 60607**

UIC is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSITION IN MOLECULAR GENETICS/MOLECULAR BIOLOGY

The Section of Molecular and Cellular Biology, Division of Biological Sciences, invites applications for a tenure-track position at the level of **ASSISTANT PROFESSOR**. The position can include an initial appointment in the Agricultural Experiment Station. Candidates must have a Ph.D. (or equivalent) and an outstanding record of research achievement. The successful candidate is expected to develop a strong research program in the general area of chromosome structure and function, gene expression, or nucleic acid molecular biology and to teach either genetics or biochemistry at the graduate and undergraduate levels. Appropriate research areas include, but are not limited to, cell division, DNA repair/recombination, regulation of gene expression, the role of transcriptional regulators in differentiation and development, and protein-nucleic interactions.

Applicants should submit (1) a curriculum vitae, (2) a statement of current and proposed research, and (3) a statement of teaching experience and interests, and arrange to have three letters of recommendation sent to: **Judy Callis, Chair, Genetics/Molecular Biology Search Committee, Section of Molecular and Cellular Biology, University of California, Davis, CA 95616-8519.** Closing date: open until filled, but all application materials, including letters of recommendation, must be received by September 30, 1998, to be assured full consideration.

The University of California, Davis, is an Affirmative Action/Equal Opportunity Employer with a strong institutional commitment to the development of a climate that supports equality of opportunity and respect for differences.

ASSISTANT/ASSOCIATE PROFESSOR TENURE-TRACK

**Department of Molecular Pharmacology
and Toxicology
School of Pharmacy
University of Southern California**

Applicants for the position of Assistant/Associate Professor (tenure-track) are invited to join an established department with a long-standing record of extramural support and teaching excellence. Start-up funds and excellent space are available. The successful candidate should have demonstrated ability, or an exceptional promise, in directing a state-of-the-art, extramurally funded research program addressing important questions at the cellular and molecular level. Applicant should have significant experience or an appropriate background to participate in teaching professional and graduate programs. Current research in the department includes free radical biochemistry and toxicology, gene expression and regulation, neurobiology, and signal transduction. Applicants should send a description of current research and future plans, curriculum vitae, and the names, addresses, and telephone numbers of three references to: **Dr. David Ann, Search Committee Chair, University of Southern California, PSC 700, 1985 Zonal Avenue, Los Angeles, CA 90033.** E-mail: ann@hsc.usc.edu. Closing date is August 31, 1998, or until the position is filled. Please visit our website: <http://www.usc.edu/hsc/pharmacy/graduate-programs.html>. *Equal Opportunity Employment/Minorities/Females/Disabled.*

ASSISTANT PROFESSOR of environmental toxicology; 12-month, tenure-track position emphasizing soil ecotoxicology in agricultural and related soil ecosystems. Research (50 percent): components and/or processes studies via mechanism- or organism-focused toxicology, environmental fate and transport, or ecotoxicology on a systems basis. Teaching: advanced course in environmental toxicology plus mentoring of students (30 percent) and outreach/extension via off-campus educational programs (20 percent). Qualifications: Ph.D. in eco- or environmental toxicology, soil science or microbiology, or related fields; experience in conducting research with xenobiotics and/or major pollutants in soil systems; and commitment to educational excellence. See website: <http://www.cfe.cornell.edu/icet/facultysearch.htm> for details. Submit letter of application, résumé, academic transcripts, and names and addresses of three references to: **Environmental Toxicology Search Committee, Cornell University, 213 Rice Hall, Ithaca, NY 14853-5601.** Telephone: 607-255-8008; e-mail: envtox@cornell.edu. Application review begins September 15, 1998; position starting as soon after January 15, 1999, as feasible. *An Equal Opportunity/Affirmative Action Educator and Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF PLANT BIOLOGY DIVISION OF BIOLOGICAL SCIENCES UNIVERSITY OF CALIFORNIA, DAVIS

The Section of Plant Biology, Division of Biological Sciences, at the University of California, Davis invites applications for a tenure-track position at the Assistant Professor level. The search seeks applicants whose research area encompasses studies of the early events in signal transduction in plants (e.g., from the level of primary signal perception up to, but not including, regulation of gene expression). Because the Section places a high priority on teaching, candidates also will be expected to demonstrate good communication skills to participate fully in undergraduate and graduate teaching and curriculum development.

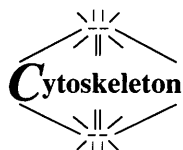
Applicants should forward a curriculum vitae, a description of past research accomplishments along with relevant publications, a clearly focused description of his/her proposed future research goals, and a statement of teaching interests. We also request that the applicant have three letters of reference sent to the Committee on his/her behalf. Position will be open until filled, but all application materials, including recommendation letters, must be received by October 15, 1998, to be assured full consideration. Applications should be submitted to: **John Harada, Chair, Signal Transduction Search Committee, Section of Plant Biology, One Shields Avenue, University of California, Davis, Davis, CA 95616.** The following e-mail address may be used for questions: e-mail: plbsearch@ucdavis.edu.

The University of California, Davis, is an Affirmative Action/Equal Opportunity Employer with a strong institutional commitment to the development of a climate that supports equality of opportunity and respect for differences.

ASSISTANT PROFESSOR. Marine Invertebrate Biology, University of California, Davis. The Division of Biological Sciences, University of California, Davis, invites applications and nominations for a position in the Section of Evolution and Ecology at the tenure-track Assistant Professor level. If appropriate, the position may be filled at the tenured **ASSOCIATE PROFESSOR** level. This position could include an appointment in the Agricultural Experiment Station. A Ph.D. or equivalent in biological sciences or a related field is required. We are interested in a Population or Organismal Biologist with a broad knowledge of marine invertebrate diversity, and who studies these organisms in an ecological or evolutionary context. Teaching responsibilities include undergraduate courses in animal diversity and advanced courses in the candidate's area of specialization. Applicants should submit (1) a curriculum vitae, (2) copies of significant publications, (3) a research statement, and (4) a summary of teaching interests and experience. Applicants should also arrange to have three letters of recommendation sent to: **Rick Grosberg, Chair, Invertebrate Biologist Search Committee, Section of Evolution and Ecology, University of California, Davis, Davis, CA 95616-8755.** Closing date: open until filled, but all application materials, including letters of recommendation, must be postmarked by October 1, 1998, to be assured full consideration. For more information about these positions, consult our website: <http://www-evc.ucdavis.edu/search.htm>. *The University of California is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the development of a climate that supports equality of opportunity and respect for diversity.*

THE PENNSYLVANIA STATE UNIVERSITY

ASSISTANT PROFESSOR of entomology, tenure-track position. Research (70 percent) on basic mechanisms using household or structural pests as model systems, with a portion directly relevant to problems in the urban pest arena. Teaching (thirty percent): specialty laboratories in urban pests, participate in team-taught undergraduate courses in chemical ecology and biocontrol, and one graduate course. Collaborate in developing and delivering public outreach/cooperative extension programs in urban pest management. A Ph.D. with research expertise in either behavioral/chemical ecology or physiology utilizing behavioral, quantitative, biochemical, and/or molecular techniques. Applicants should submit letter of application, résumé, academic transcripts, statement of research interests and prospective research program on household or structural pests, and the names and addresses of five professional references to: **J. L. Frazier, Department of Entomology, 501 ASI Building, Box 5, Penn State, University Park, PA 16802.** Closing date: September 30, 1998. *An Affirmative Action/Equal Opportunity Employer. Women and minorities encouraged to apply.*



We are seeking highly motivated, creative scientists to fill industrial postdoctoral positions. Selected individuals will have 2 or more years of experience in cytoskeletal research. Experience in quantitative protein biochemistry a must. Purification of protein from native sources, experience in assay development, and industrial experience a strong advantage. Experience with Intermediate Filaments, motor proteins, small G-proteins a plus. First authorship publication record required.

Cytoskeleton is an innovative young company that offers a stimulating environment for dedicated scientists. Applicants should send a brief statement of research interests, a cv, and photocopies of all first authorship publications to:

Cytoskeleton Inc. (PROJ-06)
1650 Fillmore Street #240
Denver, CO 80206 USA

Tenure-Track Faculty Positions in Cell/Molecular Biology

Medical College of Wisconsin Department of Cell Biology, Neurobiology, and Anatomy. Tenure-track faculty positions at the Assistant and/or Associate Professor level are available for cell biologists using cellular, molecular, developmental, and/or genetic approaches. Competitive salary, laboratory space, and start-up funds are available. Candidates at the Associate Professor level would be expected to have an established research program with significant extramural funding. Individual research programs in photoreceptor biology, color vision, functional imaging, cardiac development, differentiation of neural crest, muscle regeneration, early embryology of the mouse and mitochondrial gene expression in visual cortex are already established. The successful candidate must show promise of establishing a distinguished research career using modern technical approaches and an ability to focus on fundamental questions central to the field of cell biology. The successful candidate will be expected to contribute to a team-taught cell and tissue biology course for medical students and participate in an interdisciplinary graduate program. Ph.D. or M.D.-Ph.D. (or equivalent) plus additional postdoctoral experience essential. Interested individuals should send résumé and the names of three references to: **Dr. Joseph C. Besharse, Chairman, Department of Cell Biology, Neurobiology, and Anatomy, Medical College of Wisconsin, 8701 Watertown Plank Rd., Milwaukee, WI 53226-0509.**

For more information visit our website at <http://www.mcw.edu/cellbio/>
Equal Opportunity/Affirmative Action Employer.

THE RIBOGENE ADVANTAGE

Realize the Potential

AT RIBOGENE, WE REALIZE THE SERIOUS PROBLEM OF DRUG RESISTANCE. We are an early-stage, publicly-held (AMEX: RBO) biotechnology company focused on the identification of novel leads and the development of potential drug candidates for the treatment of infectious diseases. Our unique Drug Discovery Programs target bacterial, fungal and viral infections, with technology based on the translational control of gene expression.

WE ALSO REALIZE OUR UNIQUE POTENTIAL TO OVERCOME THIS PROBLEM. The RiboGene advantage includes powerful platform technology, cutting-edge scientific skills, custom designed screening facilities, a growing patent estate and an experienced management team. Our potential for growth and success is outstanding. Join this dynamic company and realize the advantages that a RiboGene career can offer.

ANTI-VIRAL

○ STAFF SCIENTIST

You will be responsible for the design, performance, analysis and interpretation of experiments *in vitro*, in yeast, and in human cell culture. Successful candidates will have an interest in translation and virology and a desire to work in an interactive environment. Must have experience in molecular biology, recombinant protein expression and purification, and virology. Requires a PhD in a biological science. **Job Code: GW**

ENZYMOLGY

○ SCIENTIST

You will be responsible for the analysis of enzymatic data and the development/improvement of enzyme purification and assay protocols. You will also be part of an interdisciplinary team working on the

characterization of enzymes and the design of inhibitors. Requires a PhD in a related science or equivalent experience, as well as 5 years related industrial research. Successful candidate will have experience with protein purification and enzyme kinetics. Knowledge of structural biochemistry is preferred. **Job Code: CM**

RiboGene is located in a new, state-of-the-art facility in Hayward, CA. The company offers a competitive salary and benefits plan including stock options. For consideration, send a cover letter and resume, indicating Job Code and current compensation, to: Human Resources, RiboGene, Inc., 26118 Research Rd., Hayward, CA 94545. EOE



RIBOGENE, INC.

GRADUATE PROGRAM



JOAN & SANFORD I. WEILL GRADUATE SCHOOL OF MEDICAL SCIENCES OF CORNELL UNIVERSITY



Graduate Study Toward the Ph.D. Degree in the Biomedical Sciences

The Weill Graduate School of Medical Sciences of Cornell University is composed of faculty drawn from Weill Medical College and the Sloan-Kettering Institute for Cancer Research. Programs of study in *Biochemistry and Structural Biology, Cell Biology and Genetics, Immunology, Molecular Biology, Neuroscience, Pharmacology, and Physiology, Biophysics and Molecular Medicine* lead to a Ph.D. degree. A Master's degree for health care professionals is also awarded in the program of *Clinical Epidemiology and Health Services Research*.

Generous graduate stipends of \$22,000 per year together with full tuition, fellowships, subsidized university housing, and a comprehensive student health plan are awarded to all students.

The Weill Graduate School of Medical Sciences is part of one of the world's outstanding centers for biomedical research, education, and medical treatment. Located on Manhattan's fashionable Upper East Side, the research complex includes Weill Medical College of Cornell University, Memorial Sloan-Kettering Cancer Center, New York Presbyterian Hospital, and Hospital for Special Surgery.

The Joan & Sanford I. Weill Graduate School of Medical Sciences of Cornell University is committed to the successful recruitment and training of qualified women and members of underrepresented minority groups. Cornell University is an Equal Opportunity/Affirmative Action Employer.

To receive additional information and an application kit, call or write to:

**Joan & Sanford I. Weill Graduate School of Medical Sciences
of Cornell University**

445 East 69th Street, New York, NY 10021

tel: 212-746-6565; fax: 212-746-8906

E-mail: gsm@mail.ined.cornell.edu

Also visit our **WEBSITE: <http://www.med.cornell.edu/GS/gradschool.html>**

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR OF CELL BIOLOGY AND ASSOCIATE DIRECTOR OF THE BIOPROCESS CORE

This position is a full-time non-tenure-track research appointment in the Department of Cell Biology and within the Bioprocess and Purification Core of the Center for Recombinant Gamete Contraceptive Vaccinogens. Qualifications include a Ph.D. or M.D. degree with four to five years of postdoctoral training with emphasis on the fields of reproductive biology, vaccinology, microbiology, immunology, cell or molecular biology, and experience in genetic engineering of recombinant proteins. Specific skills include cloning and sequencing of genes, design and construction of expression vectors for recombinant protein production in bacterial and eukaryotic systems, operation of bioreactors for scale-up production, chromatography techniques for protein purification, and familiarity with good laboratory practices. Candidates will be expected to conduct an independent research program in the area of gene expression during spermatogenesis as well as run a service facility expressing recombinant vaccinogens.

Apply to:

Bioprocess Search Committee
c/o John C. Herr
Director, Center for Recombinant Gamete
Contraceptive Vaccinogens
Box 439 Health Sciences Center
University of Virginia
Charlottesville, VA 22908
FAX: 804-982-3912
Telephone: 804-924-2007

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

ASSISTANT PROFESSOR CHEMICAL TOXICOLOGY AND TOXICOLOGY

Two tenure-track positions. The chemical toxicology and toxicology positions will start in January and July 1999, respectively. For the chemical toxicology position, a Ph.D. in organic medicinal chemistry, toxicology, or a closely related discipline with a strong emphasis on both chemistry and toxicology is required. Must have postdoctoral experience and publications in peer-reviewed journals, possess excellent communications skills necessary for undergraduate and graduate teaching, and be in a strong position to establish an independent, externally funded research program that will broaden the research expertise of an emerging toxicology group. Preference may be given to candidates with existing or approved grant funding. For the toxicology position, a Ph.D. in toxicology or a closely related discipline is required. The applicants must be able to teach at both the undergraduate and graduate levels and must have existing or approved external research funds in an area of toxicology that will enhance the research expertise of the toxicology group. Application review will start in August and September 1998 respectively, and continue until the positions are filled. Send curriculum vitae, names of three references, copies of selected publications, and a statement of research plans to: Dr. Z. A. Shaikh, Search Committee Chair, Chemical Toxicologist Log# 161087 or Toxicologist Log #161088, University of Rhode Island, P.O. Box G, Kingston, RI 02881. The University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT OR ASSOCIATE PROFESSOR DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS Case Western Reserve University School of Medicine

The Department of Physiology and Biophysics at Case Western Reserve University invites applications for positions at the level of Assistant (tenure-track) or Associate Professor. We seek candidates with a strong background in membrane ion channel regulation or in the integrated physiology of the cardiovascular and pulmonary systems to augment the School's existing strengths in this area. We offer a highly competitive compensation package, state-of-the-art research facilities, as well as ample start-up funds in one of the largest and vibrant departments of physiology. Candidates should submit a curriculum vitae, statement of research interests, three representative reprints, and the names and addresses of four references to: Dr. Toni Scarpa, Department of Physiology and Biophysics, 10900 Euclid Avenue, Cleveland, OH 44106-4970. Please visit our website: <http://physiology.cwru.edu>. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

DEPARTMENTS OF PEDIATRICS AND DEVELOPMENTAL BIOLOGY

The Departments of Pediatrics and Developmental Biology at Stanford University School of Medicine seek applicants or nominations of candidates for a faculty appointment. The appointment will be in the University Line Professoriate of the School of Medicine at the ASSISTANT, ASSOCIATE, or PROFESSOR level. For reasons of leadership, we are seeking a person who is at least in the second term of an Assistant Professorship.

The candidate should have a research interest in developmental biology. Candidates should have an M.D. or M.D.-Ph.D. degree, Board certification in pediatrics, and further training in any of the pediatric subspecialties. Candidates should be well-trained in basic science with the potential to compete for NIH-level grant support.

This faculty member will join an active program in basic science and translational research in pediatrics and become a member of our NIH-funded Child Health Research Center. The faculty member will receive a dual appointment in the Department of Developmental Biology, Chaired by Matthew Scott, Ph.D. The goal of the Child Health Research Center is the application of cellular, molecular, and genetic methods to unsolved problems in child health.

Interested candidates should send a curriculum vitae to: Ann Arvin, M.D., Associate Chair for Academic Affairs, Department of Pediatrics, Room G-312, Stanford University School of Medicine, Stanford, CA 94305-5208. Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.

The Division of Pharmaceutical Sciences, an established academic unit presently comprising seven full-time faculty members with proven records of research and scholarly activity, invites applications for three additional, 12-month, tenure-track positions at the ASSISTANT or ASSOCIATE PROFESSOR levels. Persons holding these new positions will teach in areas of their expertise in the Doctor of Pharmacy and/or Master's of Science programs, and in the Interdisciplinary Ph.D. Program. Successful candidates also will be required to sustain strong, extramurally funded doctoral-level research in bioorganic/synthetic medicinal chemistry, bioanalytical chemistry, and/or pharmaceuticals/drug delivery. Preference will be given to candidates who can bring with them ongoing, extramurally funded research programs. These positions are a priority part of University of Missouri-Kansas City's vision to be a premier urban-metropolitan, Research II university. Faculty rank, start-up funding, laboratory space, and compensation will be commensurate with experience, qualifications, and breadth and depth of the individual's research program. Interested individuals may apply by sending a curriculum vitae, a brief narrative description of research interests and accomplishments, and by arranging to have three letters of reference sent to: Ashim K. Mitra, Ph.D., School of Pharmacy, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110.

Equal Opportunity Employer/Affirmative Action Employer. Women and minorities are encouraged to apply.

MOLECULAR BIOLOGY/BIOCHEMISTRY UNIVERSITY OF MARYLAND, BALTIMORE

Full-time tenure-track and tenured faculty position is available for an individual who has broad expertise in biochemistry with an emphasis on molecular mechanisms. The position is primarily at the ASSISTANT or ASSOCIATE PROFESSOR levels, but outstanding candidates at any level will be considered. Successful candidates will have a Ph.D. or equivalent, a record of outstanding research achievement, and a demonstrated ability to attract external funding. The selected candidate will be expected to sustain a vigorous research program preferably in salivary gland function or bone biology, interact with basic science faculty in other departments, schools, and Investigators on our health sciences campus. Applicants should send a curriculum vitae, copies of their two most significant publications, brief descriptions of present research and future research plans, and the names of three to five individuals from whom recommendations can be obtained, to: Dr. Leslie P. Gartner, Chair Search Committee, Department of Oral and Cranio-Facial Biological Sciences, Dental School, University of Maryland, Baltimore, 666 West Baltimore Street, Baltimore, MD 21201. We especially encourage women and minorities to apply. The University of Maryland is an Affirmative Action/Equal Employment Opportunity/ADA Employer.

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR PEDIATRIC PULMONARY/AIRWAY EPITHELIAL CELL BIOLOGY University of Colorado Health Sciences Center National Jewish Medical and Research Center

The University of Colorado and National Jewish Medical and Research Center are jointly recruiting an Investigator in the area of airway epithelial cell biology. Candidates may be basic scientists or Physician-Investigators (M.D. or Ph.D. required). Interest in collaboration with Investigators working in areas relevant to cystic fibrosis, asthma, and/or airway growth and development is necessary. Send curricula vitae to either address listed below before December 1, 1998:

Frank J. Accurso, M.D.
The Children's Hospital
1056 East 19th Avenue, B-395
Denver, CO 80218

or

Robert Mason, M.D.
National Jewish Medical and Research Center
1400 Jackson Street
Denver, CO 80206

National Jewish Medical and Research Center is an Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.

TENURE-TRACK ASSISTANT/ ASSOCIATE PROFESSOR Department of Pathology and Microbiology/Immunology

The Department of Pathology has recently merged with the Department of Microbiology/Immunology. The combined Department has a position immediately available for a Ph.D., or equivalent, with postdoctoral experience. Faculty teach microbiology to Master's students in the fall and participate in a multidisciplinary microbiologic basis of medicine course in the spring. Preference will be given to an applicant with demonstrated experience in teaching microbiology with emphasis on microbial pathogenesis and immunology. The successful candidate should have or should be able to attract extramural funding. Research interests should encompass microbial pathogenesis at the molecular level.

Send curriculum vitae, statement of research interest, and the names and addresses of three references to:

Bruno J. Bromke, Ph.D., Professor
Department of Pathology and
Microbiology/Immunology
Philadelphia College of Osteopathic Medicine
4170 City Avenue
Philadelphia, PA 19131.

Equal Opportunity Employer.

Animal molecular biology position, University of Nebraska. The School of Biological Sciences and the Department of Veterinary and Biomedical Sciences invites applications for a tenure-track faculty position at the ASSISTANT PROFESSOR level in the area of animal molecular biology. Candidate interests should include a background in molecular virology, mammalian molecular genetics, or regulation of mammalian development and differentiation. Candidates will be expected to develop a vigorous research program and assume teaching responsibilities in both undergraduate and graduate-level courses in molecular and cellular biology with agricultural and/or biomedical relevance. Scientists with a Ph.D. and postdoctoral experience are encouraged to apply by sending a curriculum vitae, statement of research interest, and arrange for three letters of reference to be sent by October 15, 1998, to: Animal Molecular Biology Search Committee Chair, School of Biological Sciences, 348 Manser Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0118. The position will be open until a suitable candidate is selected. UNL is committed to a pluralistic campus community and is responsive to the needs of dual career couples. We assure reasonable accommodation under the Americans with Disabilities Act; contact: Jack Morris, Telephone: 402-472-6676 for assistance.

The University of Illinois at Urbana-Champaign, Department of Anthropology seeks to hire a BIOANTHROPOLOGIST for a tenure-track ASSISTANT PROFESSOR position beginning August 21, 1999. Specialization in anthropological genetics is preferred. Application deadline is October 15, 1998. For a complete description see website: <http://www.anthro.uiuc.edu>; Telephone: 217-333-3616.

The Science of Agricultural Genetics

Research Associate (Job #AB-820S) Analytical Biochemistry Nucleic Acid Analysis

An individual is needed to provide analytical support for the evaluation of transgenic plants including, but not limited to, corn. Primary responsibilities will comprise the application of nucleic acid analysis techniques to identify and characterize transgenic plants. Analyses of both DNA (e.g., Southern and PCR) and RNA (e.g., Northern and RT-PCR) are involved. This person will interact with other team members to evaluate and implement state-of-the-art methodologies. Other duties include conducting experiments, troubleshooting assay procedures, and managing and analyzing data. M.S. or B.S. degree with two years of laboratory experience in nucleic acid analysis, preferably involving transgenic plants, is essential. Knowledge of quantitative PCR techniques will be useful. Strong interpersonal, organizational and communication skills are imperative. Computer skills and the use of robotic systems to aid in high throughput sample analysis will also be advantageous.

For confidential consideration send 3 copies of cover letter and current resume: Pioneer Hi-Bred International, Inc., Attn: Human Resources-Research (Job #AB-820S), P.O. Box 1004, Johnston, IA. 50131-1004 or e-mail jobsresearch@phibred.com. Applications received by September 1, 1998 will be assured of consideration; however, applications will be considered until the position is filled.

Pioneer Hi-Bred International, Inc., is the world leader in agricultural genetics. Founded in 1926, we are a publicly held company that invests more than \$160 million in research and product development. Pioneer® brand products are grown in almost every crop-producing continent in the world. At our headquarters in Des Moines, Iowa, we're adding to our Research team.



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Junior Faculty Positions Department of Chemistry The Ohio State University

The Department of Chemistry at The Ohio State University seeks to recruit assistant professors to its faculty, to begin during the summer or autumn of 1999. Although the department strongly prefers junior faculty applications, we will accept materials from any qualified candidate.

Candidates in the area of bioanalytical chemistry, environmental chemistry, chemical sensors, and mass spectrometry will be considered.

Applications received before October 23, 1998, will be given full consideration. Candidates should submit a curriculum vitae, undergraduate and graduate transcripts, and a statement of research and teaching interests. In addition, candidates should arrange for three letters of recommendation to be sent directly to the search committee.

**Chair, Bio/Analytical Faculty Search Committee
c/o Mrs. Susan Krumm**

Department of Chemistry

**The Ohio State University 100 W. 18th Avenue
Columbus, OH 43210**

(614) 292-6172; Fax (614) 292-1685

E-mail: skrumm@chemistry.ohio-state.edu

Visit our website at: <http://www.chemistry.ohio-state.edu>

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, Vietnam-era veterans, disabled veterans, and individuals with disabilities are encouraged to apply.

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LAB TECHNICIANS

AA/BA/BS in a life science with 1+ years laboratory experience. Must have Wet Chemistry, Raw Materials, Reagent Preparation & other simple lab experience.

CHEMIST I

BS in Chemistry with 1+ years experience in a pharmaceutical laboratory. Must have solid HPLC background. Recent graduates are encouraged to apply.

CHEMIST II

BS/BA in Chemistry with 2-3 years relevant experience, to include HPLC and pharmaceutical background. Will conduct testing of pharmaceutical products, bulk drug substances and intermediates using moderately complex methods.

SCIENTIST I GROUP LEADER

PhD in Chemistry (or related physical science) with 6-10 years experience. Will conduct testing of pharmaceutical products, bulk drug substances, and intermediates using complex methods.

SENIOR BIOSTATISTICIAN

PhD in Biostatistics or Statistics with 1-2 years experience in clinical research or a Master's in Biostatistics (or equivalent) with a minimum of 3 years experience in clinical research. Significant expertise in using SAS.

STABILITY MANAGER

BS in Physical Science with 3+ years experience in stability related responsibilities. Will manage 20+ team members and direct/coordinate the receipt, storage and distribution of samples for laboratory analysis.

A thriving subsidiary of AccuStaff, we offer our professionals a wide variety of placement options and schedules, as well as group health insurance, 401(k), paid vacation and paid holidays. Equally appealing is our location in the Raleigh/ Research Triangle Park area of North Carolina offering a relaxed and excellent quality of life, beautiful beaches just a short drive away and access to superior universities. For confidential consideration, forward your resume to: **B. Allan Dudley, Branch Manager, SCIENTIFIC STAFFING, INC., 2000 Regency Parkway, Suite 370, Cary, NC 27511. Fax: (919) 467-2303, Ph: (919) 467-3113, E-mail: adudley@accustaff.com** An Equal Opportunity Employer

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POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF PHARMACOLOGY University of Florida College of Medicine

The Department of Pharmacology and Therapeutics in conjunction with the University of Florida Brain Institute invites applications for a tenure-track faculty position for individuals having a Ph.D. and/or M.D. degree. The position is supported in part by the Lucille P. Markey Charitable Trust. The successful candidate will be expected to develop an independent but interactive research program and contribute to the teaching of professional and graduate students. Individuals with demonstrated productivity using cellular, molecular, or genetic approaches to the study of signal transduction in the central nervous system or other areas are encouraged to apply. The position offers a competitive salary, excellent research facilities, and a generous start-up package. Additional information on the Department and Brain Institute are available at [website: http://www.med.ufl.edu/pharm/](http://www.med.ufl.edu/pharm/). Applicants should send their curriculum vitae, a brief description of research interests, and three letters of recommendation to: Chair, Faculty Search Committee, Department of Pharmacology and Therapeutics, Box 100267, University of Florida, Gainesville, FL 32610-0267. Application deadline is October 9, 1998, with a start date on or after March 1, 1999. The University of Florida is an Equal Opportunity Employer, and minorities and women are especially encouraged to apply.

NEUROBIOLOGY AND PHYSIOLOGY NORTHWESTERN UNIVERSITY ILLINOIS

Neurobiology/physiology, ASSISTANT CHAIR. The Department of Neurobiology and Physiology, Northwestern University, Evanston, invites applications for the position of Assistant Chair. This is a regular, full-time, non-tenure-track position with the rank of LECTURER. The Assistant Chair's duties include project management, planning analyses, assistance in the writing of grants, development of industrial relations, administration of graduate recruitment, and coordination of graduate training and research. Candidates must have a Ph.D. in life sciences; administrative and academic experience is preferred. Send curriculum vitae and arrange for three letters of reference to be sent to: Dr. David Ferster, Associate Chair, Department of Neurobiology and Physiology, Northwestern University, 2153 North Campus Drive, Evanston, IL 60208-3520. Applications will be evaluated as they are received with the final deadline set at September 1, 1998. Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States.

Neurobiology RESEARCH-TRACK POSITIONS available immediately for an Integrative and/or Cellular Neurophysiologist to study membrane properties, synaptic integration, and plasticity in mammalian olfactory bulb and piriform cortex. Demonstrated experience and publications in intracellular or patch clamp recording in slices, and/or infrared and/or voltage/Ca-sensitive dye imaging required. Competitive salary and fringe benefits. Opportunity to interact with Neuroscientists in the department ([website: http://neurobiology.umaryland.edu/](http://neurobiology.umaryland.edu/)) and the interdisciplinary Neuroscience Program ([website: http://neuroscience.umaryland.edu/](http://neuroscience.umaryland.edu/)). Applicants should possess a Ph.D. and/or M.D. Excellent oral and written communication skills are required. Send curriculum vitae and names, addresses, and telephone numbers of three references to: Dr. M. Ennis/M. Shipley, Department of Anatomy and Neurobiology, University of Maryland School of Medicine, 685 West Baltimore Street, Baltimore, MD 21201. E-mail: mennis@umaryland.edu. The University of Maryland is an Affirmative Action/Equal Employment Opportunity/ADA Employer. Minorities and women are encouraged to apply.

University of Florida seeks a RESEARCH ASSOCIATE PROFESSOR in the Department of Medicine, Division of Endocrinology. Ph.D. in analytical or organic chemistry and extensive prior experience in both methods of development and application of GC, GC/MS, NMR, and LCMS, as applied to *in vivo* and *in vitro* biological samples and systems. Salary and benefits commensurate with experience. Recruiting deadline August 27, 1998. Anticipated starting date September 18, 1998. Please reply with curriculum vitae to: Peter Stacpoole, M.D., Professor and Program Director, Box 100277 JHMHC, Gainesville, FL 32610. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

DRUG DISCOVERY RESEARCH

RepliGen Corporation performs cutting-edge research to develop new therapeutics through drug discovery technology focused on protein-protein interactions. Company operations are supplemented by a successful line of recombinant protein products. Employment opportunities now exist in chemistry and biology research. We are seeking dynamic individuals eager to apply their experience within a stimulating, small company setting.

SYNTHETIC CHEMISTS, B.S./M.S.

Several positions are available in combinatorial chemistry and medicinal chemistry for experienced researchers able to apply new techniques in synthesis and analysis of potential drug candidates. Scientists will apply techniques of solid and solution phase parallel synthesis to generate target directed and hit analog libraries. A B.S. or M.S. in chemistry and one to three years of industrial experience would be appropriate. Candidates must be able to design, execute, and interpret experiments with some independence.

RESEARCH CELL BIOLOGIST AND BIOCHEMISTS, M.S./PH.D.

Several openings exist for scientists with experience in biological characterization of protein function. These positions will participate in the characterization of new drug leads using biochemical and cell-based techniques. Cell biology candidates should have direct experience using cells to measure responses to protein agonists such as signal transduction, proliferation, or differentiation. We are also seeking Biochemists with skills in purification and functional characterization of protein-ligand interactions. The ability to develop new assays to characterize lead compounds will require innovation and experience in problem solving.

Repligen is located in Needham, Massachusetts. Competitive salary and benefits packages include equity participation in a publicly traded, turn-around company. Send résumés to: Human Resources, 117 Fourth Avenue, Needham, MA 02494.

CO-DIRECTOR, CENTER FOR THE NEURAL BASIS OF COGNITION UNIVERSITY OF PITTSBURGH

The University of Pittsburgh seeks a Senior Scientist to serve as Co-Director of the Center for the Neural Basis of Cognition (CNBC), a joint effort of the University of Pittsburgh and Carnegie Mellon University. Candidates should have a distinguished record of publication and grant funding in the area of cognitive neuroscience, broadly defined. Candidates from all areas of cognitive neuroscience will be considered but we are particularly interested in individuals whose work is in human functional brain imaging. The University of Pittsburgh Co-Director will work closely with Dr. James L. McClelland, Carnegie Mellon University Co-Director, in the administration of the CNBC. The successful candidate will have a primary appointment in an appropriate basic science or clinical department of the University of Pittsburgh School of Medicine to be determined by the candidate's background and interests. Candidates should apply with a letter stating their scientific interests and a curriculum vitae and bibliography to: Robert Y. Moore, M.D., Ph.D., Chair, Search Committee, Department of Neurology, University of Pittsburgh, 3471 Fifth Avenue, Suite 811, Pittsburgh, PA 15213.

University of Florida seeks a RESEARCH ASSISTANT PROFESSOR in the Department of Medicine, Division of Endocrinology. Ph.D. degree with five (5) years of experience. Background in vascular cell biology, diabetes, lipoprotein, and lipid metabolism. Grant experience required. Salary and benefits commensurate with experience. Recruiting deadline, December 31, 1998. Anticipated starting date July 1, 1999. Please reply to: Desmond Schatz, M.D., Associate Professor, Division of Endocrinology, Box 100277 JHMHC, Gainesville, FL 32610. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

TENURE-TRACK POSITION NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

A tenure-track position is available in the Laboratory of Allergic Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service, for an M.D. or M.D.-Ph.D. scientist to develop an independent research program related to the exploration of the mechanisms of allergic inflammation and their treatment. Space, technical and Postdoctoral Fellow support, supply budget, and salary are committed. Training in the techniques of molecular biology and/or clinical research is desirable. Preference will be given to applicants who are Board-certified in pediatrics, have training in allergy and immunology, and have studied eosinophil biology. Applicants must be U.S. citizens or permanent residents. A curriculum vitae, bibliography, three letters of reference, a detailed statement of research interest, and selected publications should be submitted to: Dr. Thomas Fleisher, Chairperson, c/o Cindy Pagonis, National Institutes of Health, National Institute of Allergy and Infectious Diseases, Laboratory of Allergic Diseases, Twinbrook II, Room 200E, 12441 Parklawn Drive, Rockville, MD 20852.

The NIH is an Equal Opportunity Employer.

CAMPUS VETERINARIAN

The University of California, Riverside (UCR), invites applications for a Campus Veterinarian/Unit Director (50 percent time with benefits) to provide veterinary care to laboratory animals, provide guidance and training to Researchers and Animal Technicians, continue a program of veterinary care in accordance with APHIS regulations, provide emergency care, and manage the Office of the Campus Veterinarian, supervising a Technician and an Administrative Assistant. Applicants may be able to arrange additional teaching or research opportunities with one or more academic units at UCR if necessary.

Minimum requirements include a D.V.M. degree, demonstrated experience with a variety of laboratory and wild animals, and excellent interpersonal and communication skills. Salary commensurate with qualifications and experience. Position is currently open and will remain open until filled.

A complete list of requirements is available from the Human Resources Office ([website: http://humanresources.ucr.edu](http://humanresources.ucr.edu)). Please submit a letter of interest, résumé, and a list of references to: The University of California, Riverside, Human Resources, Position #98-07-026, 1160 University Avenue, Riverside, CA 92521. Equal Opportunity Employer.

California Institute of Technology invites applications for a position as ASSISTANT PROFESSOR of chemical physics/physical chemistry, including multidisciplinary areas with experimental and/or theoretical emphasis. The initial appointment is four years. Outstanding candidates who have completed their Ph.D. and have a strong commitment to research and teaching excellence are encouraged to apply. Submit by November 15, 1998, curriculum vitae, publication list, a concise description of proposed research, and three letters of recommendation to: Professor Ahmed Zewail, Chair, Faculty Search Committee, Arthur Amos Noyes Laboratory of Chemical Physics, 127-72, California Institute of Technology, Pasadena, CA 91125. The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

A POSTDOCTORAL/RESEARCH ASSOCIATE position is available to study the molecular embryology of lung development. Applicants should be experienced in molecular biology including RNA and DNA work and *in situ* hybridization. Salary and benefits are competitive. Opportunity for independent work and promotion. Contact: Parviz Minoo, Ph.D., Department of Pediatrics, University of Southern California School of Medicine, GLB at 1801 East Marengo, Los Angeles, CA 90033. E-mail: minoo@hsc.usc.edu.

POSTDOCTORAL RESEARCH position available in hematopoietic stem cell biology for studies on engraftment of human stem cells. Qualified candidate should have prior experience in working with animals and molecular and cell biology. Please send curriculum vitae, description of research experience, and two letters of reference to: Diane Krause, M.D., Ph.D., Yale University School of Medicine, Box 208035, New Haven, CT 06520-8035.



Oread, Inc., is a fast growing international pharmaceutical services company. We provide high quality services for the Pharmaceutical industry. Our clients include some of the largest and most innovative companies in the world.

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Currently, we are conducting a search for the following professional positions:

Director of Analytical Chemistry

We have two positions available. One located at our Atlanta, Georgia site and the other at our Farmington, Connecticut facility. You'll need a graduate degree in Chemistry (Ph.D. preferred) along with 7-10 years directly related experience. You will manage a team of scientists and you'll be responsible for overall department operations.

Formulations Scientist


We have numerous positions available at most of our sites nationwide. You'll be a part of a growing, professional team of scientists. Requirements include a Bachelor's degree in Chemistry with at least two years of Pharmaceutical Formulations/Product Development experience.

Analytical/QC Chemist

Multiple positions exist throughout most nationwide sites. You'll join one of our fastest growing scientific teams. You will need a Bachelor's degree in Chemistry with at least two years of directly related experience.

In return for your contributions, we offer an excellent compensation/benefits package, a professional environment that fosters career challenge and growth, and an environment that is employee friendly. Please send resume along with location preference to: **Oread, Inc., Attn: Human Resources, 150 Technology Parkway, Norcross, GA 30092. FAX: 770-263-1101. EOE M/F/D/V**

OREAD



MAYO CLINIC

POSTDOCTORAL FELLOWS AND TECHNICIANS

Motivated research technicians and postdoctoral fellows required to develop innovative approaches to cancer gene therapy at Mayo Clinic Rochester. Successful applicants will join the Molecular Medicine Program, headed by **Dr. Stephen J. Russell**, recently recruited to Mayo Clinic to establish new programs of gene therapy research. Topics for individual projects include: the development of targeted gene delivery vehicles capable of efficient cell-specific *in vivo* gene delivery; the use of forced evolution (randomization/selection) strategies for the optimization of vector performance; the development of novel therapeutic genes with potent bystander effects to mediate efficient tumor destruction *in vivo*; and the development of novel strategies to harness the immune system for treatment of cancer. *In vivo* testing and clinical translation of promising vectors will be a high priority. Experience in molecular biology, protein engineering, tumor immunology, gene transfer technologies, and/or *in vivo* cancer models is desirable. Application deadline is August 31, 1998. Please send curriculum vitae and bibliography to:

Mr. Owen E. McClure
Mayo Foundation
Research Administration, Siebens 6th Floor
200 First Street Southwest
Rochester, MN 55905

Informal e-mail inquiries should be sent to **Dr. Stephen J. Russell** at sjr@mrc-lmb.cam.ac.uk.

Mayo Foundation is an Affirmative Action and Equal Opportunity Employer and Educator.

NEW ENGLAND BIOLABS

Positions Available

New England Biolabs, a world leader in the production of restriction endonucleases and other related products for the recombinant DNA field, seeks applicants for:

MOLECULAR BIOLOGIST (Phospho-Antibody Development): Minimum requirements include a BS or MS degree in Cell or Molecular Biology. Experience with the use of antibodies and antibody characterization including western blotting, ELISA, protein A purification, peptide-affinity chromatography, immunocytochemistry, and immunoprecipitation techniques is essential. Experience with mammalian tissue culture, transfection, and purification of overexpressed fusion proteins in mammalian cells will also be helpful. Send a resume and three references to: **Dr. Michael Comb**.

POSTDOCTORAL FELLOW (Intracellular Signaling Pathways): The Cell Signaling Laboratory has a position available to characterize signaling pathways regulating cell growth and survival. Projects involve biochemical analysis as well as molecular cloning of protein kinases and other signaling molecules using phospho-specific antibodies. Minimum requirements include a Ph.D. degree in Molecular Biology, Biochemistry, or Cell Biology with some experience in the molecular biology of signal transduction and gene regulation. Experience with basic techniques in molecular biology, protein phosphorylation and biochemistry are recommended. Send a resume and three references to: **Dr. Michael Comb**.

MOLECULAR BIOLOGIST (Enzyme Discovery and Engineering): BS or higher with strong background in molecular biology required. Responsibilities may include expression library construction and screening, mutagenesis and combinatorial PCR, polymerase and kinase assay development, and two-hybrid screening. Additional protein experience (e.g. immunoprecipitation, westerns, affinity purification) a plus. Send a resume and three references to: **Dr. Michael Melnick**.

New England Biolabs, Inc.

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Beverly, MA 01915

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POSITIONS OPEN



AGRICULTURAL ENGINEER GS-11/12/13/14. U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) is seeking candidates for a permanent full-time position to conduct basic and applied research related to the quality of deciduous tree fruit crops with emphasis on apples and cherries during growth and maturation and various postharvest stages. The position requires professional research experience and/or directly related education with proven ability to plan, conduct, and report independent research in the specialty area. Applicants must have professional knowledge of engineering principles and technology related to physics, computers, electronics, and optics as well as knowledge of fruit physiology. Salary commensurate with experience (\$38,593 to \$84,495). Negotiable hiring incentives are possible. *U.S. citizenship required.* For information about the research program, contact: **Dr. George Hosfield, Telephone: 517-355-0110.** For full-text vacancy announcement, which includes application information, call the ARS Dial-A-Vacancy service, **Telephone: 301-504-1482** (identify announcement No. ARS-S8N-8227), or access ARS Employment Opportunities on **website: <http://www.ars.usda.gov>**. Complete applications must be postmarked by August 28, 1998. Incomplete applications will not receive consideration. *USDA/ARS is an Equal Opportunity Employer.*

CAREER IN OPTOMETRY, OPTOMETRIC RESEARCH, OR TEACHING

The New England College of Optometry offers a unique program for those with a doctorate in the sciences: biology, chemistry, physics, psychology, etc. Candidates have the opportunity to obtain the Doctor of Optometry (OD) degree in 27 months. The program begins annually in June. Employment opportunities exist in private practice, industry, education, and research. Contact: **The Admissions Office, The New England College of Optometry, 424 Beacon Street, Boston, MA 02115. Telephone: 800-824-5526; e-mail: admiss@ne-optometry.edu.** Additional information at **website: www.ne-optometry.edu**.

ASSISTANT SCIENTIFIC DIRECTOR GENE THERAPY

Center in connective tissue diseases is seeking a scientist to assist in the administration of a newly established center for gene therapy for musculoskeletal diseases, such as osteoporosis and various types of arthritis. Research experience in viral vectors, gene delivery systems for *ex vivo* and *in vivo* gene transduction, and *in vivo* gene therapy is highly desirable. Administrative experience essential. Salary and benefits competitive; possible long-term position. Send résumé, cover letter, and names of three references to: **David J. Baylink, M.D., Loma Linda University, P.O. Box 7210, Loma Linda, CA 92354.**

POSTDOCTORAL POSITIONS

Positions available in a multidisciplinary training program to study nitric oxide signaling mechanisms in vascular smooth muscle in response to exercise. Biochemical, molecular biological, and physiological approaches used with opportunities to design unique training program based on previous experiences. Please address inquiries to: **James T. Stull, Ph.D., Department of Physiology, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040. Telephone: 214-648-6849; FAX: 214-648-2974; e-mail: jstull@mednet.swmed.edu.** An Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF FLORIDA

Seeks an **ASSISTANT/ASSOCIATE PROFESSOR** in the Department of Medicine, Division of Infectious Disease, M.D. or Ph.D. with a minimum of four (4) years of postdoctoral experience. This is a tenure-track position with the responsibilities that includes DNA sequencing, robotics, and small-volume processing. Salary and benefits commensurate with experience. Recruiting deadline August 27, 1998. Anticipated starting date September 18, 1998. Please reply with curriculum vitae to: **Dr. Reuben Ramphal, Professor, Box 100277 JHMC, Gainesville, FL 32610.** An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ENVIRONMENTAL SOCIAL SCIENTIST

Yale University's School of Forestry and Environmental Studies seeks a **JUNIOR-LEVEL SOCIAL SCIENTIST**, demonstrating a potential for international leadership, for a ladder faculty position. Candidates are desired who (1) have a record of innovative, problem-oriented scholarship on the contemporary relationship between social organization and the physical environment, (2) combine in-depth experience on particular questions regarding society and environment with broad-based conceptual skills and intellectual interests that offer the capacity to operate at multiple scales, and (3) demonstrate an ability to work with colleagues from other disciplines, in particular from the natural sciences. Possible areas of research include but are not limited to (1) community-based management of natural resources and protected areas, (2) environmental institutions, organizations, and movements, and (3) social equity and environmental conservation. Innovative approaches to methodology, and the linkage of theoretical and policy-oriented concerns, are highly desirable. Geographic focus is open but the capacity to conduct research both domestically and internationally is especially desirable. Candidates must demonstrate capacity for excellence in teaching and advising Master's and Doctoral students with diverse theoretical, topical, and geographic interests, and with both professional and academic career paths. Candidates may apply from a multitude of social science disciplines, but they must demonstrate both clear expertise within one of these disciplines and a capacity for interdisciplinary research and teaching. The appointment will be made at the level of **ASSISTANT or ASSOCIATE PROFESSOR** (with term).

Applicants should send a curriculum vitae, statement of research and teaching interests, two reprints or other professional publications, and a list of three references to: **Professor Michael R. Dove, Chair, Environmental Social Scientist, Yale University School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, CT 06511 USA. Telephone: 203-432-3463; FAX: 203-432-3817; e-mail: michael.dove@yale.edu.**

Deadline for submission of applications is December 1, 1998.

Yale University is an Equal Opportunity Employer, and women and minority candidates are especially encouraged to apply.

NEUROSCIENTIST

The University of Tennessee, Memphis, College of Medicine, Department of Anatomy and Neurobiology, is seeking qualified applicants to fill two **ASSISTANT** and/or **ASSOCIATE PROFESSOR** tenure-track positions. Candidates must have a Ph.D., M.D., or equivalent, postdoctoral experience, and an active research program in neuroscience, and must show a high potential for external funding. Candidates must participate in teaching of professional students and a graduate course in their area of expertise. Rank and salary will be commensurate with qualifications. The Department is the center of a rapidly expanding, multidisciplinary neuroscience program with a highly interactive, productive group of Neuroscientists. Please submit a curriculum vitae, a brief statement of research and teaching experience, and names of three references to: **S. T. Kitai, Chair, Department of Anatomy and Neurobiology, University of Tennessee-Memphis, 855 Monroe Avenue, Memphis, TN 38163.** Review of applications will begin in September 1998 and continue until the positions are filled.

The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer.

POSTDOCTORAL POSITION IN DEVELOPMENTAL BIOLOGY

A position is available to study the transcriptional regulation of hepatogenesis. Projects use molecular genetic approaches in mice and ES cells including production of ES cell-derived embryos by tetraploid aggregation. A background in molecular biology is essential and experience with developmental biology or transcription factors would be advantageous. A description of current research is available at **Dr. Stephen Duncan's** listing on the **website: <http://www.mcw.edu/cellbio/index.html>**. Send a curriculum vitae including addresses of three referees to: **Dr. Stephen Duncan, Department of Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226-0509. E-mail: duncans@mcw.edu.**

Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN



The USDA, Agricultural Research Service, Beltsville Agricultural Research Center, Plant Sciences Institute, Fruit Laboratory, in Beltsville, Maryland is seeking a **RESEARCH HORTICULTURIST, GS-437-11/12.** Salary is commensurate with experience (GS-11: \$39,270 to \$51,049 per year, GS-12: \$47,066 to \$61,190 per year). *Candidates must be U.S. citizens.* The position conducts high-priority basic and applied horticultural research on sustainable cultural systems applicable to small fruit production. For information on the research program, contact: **Dr. Richard Zimmerman, Telephone: 301-504-6647.** This position has specific education and experience requirements, and factors that must be addressed. In order to ensure submission of a complete application, applicants must request a copy of the vacancy announcement by **Telephone: 301-504-1484** or by printing it from the Internet at **website: <http://www.ars.usda.gov>**. The vacancy announcement number for this position is ARS-S8B-8250. This announcement closes August 31, 1998. *USDA/ARS is an Equal Opportunity Provider and Employer.*

Oncogene Mechanisms Section, Basic Research Laboratory, Division of Basic Sciences, National Cancer Institute (NCI) has an immediate opening for a **POSTDOCTORAL FELLOW** to study mechanisms of cell-mediated suppression of MKK/MAPK-dependent transformation. Strong background in recombinant DNA cloning techniques is essential, while *in vitro* mutagenesis and yeast-hybrid experience would be desirable. Candidate should possess M.D. or Ph.D. degree, be a *U.S. citizen or permanent resident of United States*, and have less than five years of postdoctoral experience. Send curriculum vitae and the names of three references to: **Donald G. Blair, Chief, Oncogene Mechanisms Section, Frederick Cancer Research and Development Center, Building 469, Room 102, Frederick, MD 21702-1201. Telephone: 301-846-1318; e-mail: blair@ncifcrf.gov.** Application deadline: October 1, 1998. *NIH is an Equal Opportunity Employer.*

RESEARCH TECHNICIAN

Immediate opening at Johns Hopkins University in a laboratory seeking to understand calcium-channel function. The candidate must have significant experience with molecular biology, and appreciation for electrophysiology. Significant responsibilities for cloning novel subunits, creating chimeric channels for structure-function analysis, and developing engineered adenoviruses for physiological studies. Enthusiastic and stimulating environment for the motivated Technician. Send curriculum vitae to: **Dr. D. T. Yue, FAX: 410-955-0549; e-mail: dyue@bme.jhu.edu.** *Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately for NIH-funded project to investigate signal transduction mechanism in calcium-mediated cell proliferation and apoptosis. Experience in molecular and cellular biology is essential. Send a curriculum vitae, three letters of recommendation, and official transcript of highest earned to: **Dr. Tuan H. Kuo, Department of Pathology, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, MI 48201. E-mail: tkuo@med.wayne.edu.** *Affirmative Action/Equal Employment Opportunity.*

SABA University School of Medicine. Full-time **MEDICAL SCHOOL FACULTY** openings exist in pharmacology, anatomy, biochemistry, epidemiology, histology, physiology, genetics, and clinical medicine. Salary range \$30,000 to \$36,000 USD, tax-free. All positions on Saba, a small, tropical, Dutch island near St. Maarten. Clean, crime-free, English-speaking, five-one faculty ratio. Write or call: **Dr. David Fredrick, P.O. Box 386, Gardner, MA 01440. Telephone: 978-630-5122; e-mail: saba@tiac.net; website: www.saba.org.**

The Gertrude H. Sergievsky Center seeks a **STAFF ASSOCIATE** to establish genetic counseling services for patients with Alzheimer's disease and other neurological disorders. Responsibilities include patient counseling, family studies analysis, and data collection for studies. Must have excellent writing and verbal skills. B.S./M.S. in genetics required. Send résumé to: **R. Mayeux, M.D., Columbia University, P&S Box 16, 630 West 168th Street, New York, NY 10032.** *We take Affirmative Action toward Equal Employment Opportunity.*

RESEARCH ASSOCIATES

In Vivo Pharmacology

NEUROCRINE BIOSCIENCES, INC. is a leading neuroimmunology company focused on the discovery and development of novel therapeutics to treat diseases and disorders of the central nervous system (CNS) and immune systems. Because we are a small, growing company with an emphasis on research, scientists at all levels play a key role in our success.

Behavioral Pharmacology

This Research Associate will assess drug efficacy in a wide variety of animal models and will also be involved in the development and validation of novel targets. Requirements are a BS/MS in Biology, Neurobiology or Psychology and 1-4 years experience in behavioral pharmacology, physiology or toxicology. Research experience must involve extensive animal handling. Surgical experience and familiarity with receptor pharmacology and neurochemistry are also a plus. JOB CODE: SM-MP.

Stroke Research

This Research Associate's responsibilities include performing experiments using animal models and aiding in the development of new models, cannulation, drug administration, histological analyses, and computer analysis of data. Requirements are a BS/MS in science and 2+ years experience in rodent or other small animal surgery. Experience in animal models of stroke (particularly middle cerebral artery occlusion) is also required. JOB CODE: SM-KM.

NEUROCRINE BIOSCIENCES, located in the biotech hub of San Diego, offers a competitive compensation and benefits package with stock options. We have a new headquarters building with state-of-the-art research facilities. Please forward your resume to Neurocrine Biosciences, Inc., Human Resources, Job Code____, 10555 Science Center Dr., San Diego, CA 92121 or fax: (619) 623-3397. E-mail: hr@neurocrine.com. EOE.

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BIOSCIENCES

GLOBAL OPPORTUNITIES

KUWAIT UNIVERSITY FACULTY OF ALLIED HEALTH SCIENCES & NURSING Teaching Appointments in Medical Laboratory Sciences

The Department of Medical Laboratory Sciences (MLS) at the Kuwait University, Faculty of Allied Health Sciences & Nursing invites applications for the following academic positions:

1. Associate Professor of Clinical Chemistry

The applicant should have a Ph.D. degree in Medical Biochemistry and 5 years teaching experience to medical/allied health students. The candidate must also have active involvement in a hospital clinical chemistry laboratory and should be professionally qualified and experienced to manage a clinical chemistry laboratory in a large hospital. Responsibilities include teaching to undergraduate students, providing hospital services, and developing research areas preferably in carbohydrate/protein chemistry.

2. Assistant Professor of Immunology

Applicant must have a Ph.D. degree in Immunology and extensive bench-level experience in a hospital laboratory. Preference will be given to candidates who are professionally certified (ABMLI, MRC Path). Responsibilities include teaching and training of undergraduate students, developing and managing diagnostic immunology services, and conducting research in clinical Immunology.

3. Assistant Professor of Diagnostic Molecular Biology

Applicant must have a Ph.D. degree in Molecular Biology and should have at least 2 years of undergraduate teaching experience. The person should have extensive experience in a hospital clinical laboratory providing specialized molecular technology-based diagnostic services. Responsibilities include professional teaching and training to undergraduate students, specialized hospital services in molecular diagnostics, and pursuing research funding.

4. Assistant Professor of Cytology

Candidates must have a Ph.D. in Cytology with Board certification. Experience in teaching to allied health students and supervision of the hospital clinical cytology laboratory are essential. The successful candidate will be expected to participate in teaching and training of undergraduate students; organize refresher courses and workshops for the hospital medical technologists and establish an independent research laboratory.

5. Assistant/Associate Professor of Histology/Histopathology

Candidates must have a Ph.D. degree in Histology or Histopathology and appropriate postdoctoral experience. Laboratory experience in normal histological procedures, special staining techniques, immunohistochemical methods, and familiarity with cell culture methods are essential. Experience in techniques pertinent to molecular diagnostic pathology will be an asset. A strong commitment to teaching and research is desired. The successful candidate will be expected to establish an independent-funded research program within the department.

The Department of Medical Laboratory Sciences is a multidisciplinary department consisting of six major divisions: Microbiology, Hematology, Histopathology/Cytology, Biochemistry/Clinical Chemistry, Immunology, and Diagnostic Molecular Biology. The department is active in professional teaching and training of undergraduate students, hospital services, and research in the above disciplines.

For full details of salary, benefits, appointment criteria, and other information please contact the Kuwait University, Health Science Centre page on the World Wide Web (hsccwww.kuniv.edu.kw). Applications by e-mail may be sent to: stanly@hsc.kuniv.edu.kw.

POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST

DNA Plant Technology Corporation, a leading agricultural biotechnology company, has an opening for a scientist in a research group developing novel varieties of fruits and vegetables.

We are seeking a Ph.D. in molecular biology to work in our research and development group focused on vegetatively propagated plants. The Plant Molecular Biologist will participate in aspects of both technology development and variety development, with the long-term goal of crop improvement for agronomic traits. Applicants must have two-plus years of postdoctoral experience with demonstrated expertise in a wide array of molecular biology techniques including cloning, sequencing, RT-PCR, hybridization, plasmid constructions, and library constructions/screening. Additional experience in plant microtechniques such as tissue embedding, microtomy, and *in situ* hybridization is highly desired. Must have the ability to work in a highly interactive environment and keep abreast of current advances in plant sciences. Good oral and written communication skills required.

Interested individuals should send the names of three references, a résumé, and cover letter referencing Position #98-04 to: **DNA Plant Technology, Attn: Human Resources, 6701 San Pablo Avenue, Oakland, CA 94608. FAX: 510-450-9366. Visit the DNA Plant Technology Corporation's website: www.dnap.com.**


RESEARCH ASSOCIATE. The Department of Otolaryngology—Head and Neck Surgery at the University of Arkansas for Medical Sciences is seeking qualified individuals for appointment in their research division. The focus of this appointment is to develop, direct, and facilitate basic science research in the area of head and neck oncology. The department offers a large clinical volume in the area of head and neck cancer through three full-time Head and Neck Oncologists. Applicants should have a strong interest in cancer research, and prior experience with basic molecular biology techniques. Qualifications include a Ph.D. degree in one of the basic sciences applicable to molecular oncologic research. Postdoctoral experience and prior grants in cancer research are preferred but not required. Academic appointment and salary will be commensurate with experience. Interested individuals should contact or submit a curriculum vitae to: **Ehab Hanna, M.D., Director of Head and Neck Oncology, University of Arkansas for Medical Sciences, Department of Otolaryngology, 4301 West Markham Street, Slot 543, Little Rock, AR 72205-7199. FAX: 501-686-8029.**

Two full-time **POSTDOCTORAL POSITIONS** available November 15, 1998. Appointment is renewable to a maximum of five years from Ph.D. One position will be involved in studies of transcription by single RNA polymerase molecules. The other will participate in studies of the mechanical unfolding of individual protein molecules. Both projects will include mutational, biochemical, and single molecule biophysical methods such as laser tweezers and atomic force microscopy. Candidates should have experience in transcription, molecular biology, biochemistry, or physical biochemistry. Ph.D. required; degree conferred within the last five years. Send curriculum vitae, description of research experience, and name of three references to: **Professor Carlos Bustamante, Molecular and Cell Biology, University of California, 229 Stanley Hall #3206, Berkeley, CA 94720-3206 by September 15, 1998. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL ASSOCIATE position to study the molecular genetics of oncogene/tumor suppressor gene expression in ovarian cancer with a goal of establishing novel gene therapy strategies. Molecular biology experience required. Send curriculum vitae and references to: **Dr. Richard Buller, Department of Obstetrics and Gynecology, University of Iowa College of Medicine, Iowa City, IA 52242-1080. The University of Iowa is an Equal Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.**

POSTDOCTORAL POSITION available to investigate the role of Hox transcription factors in skeletal development and malformations in transgenic mice. Experience in cell and molecular biology required. Contact: **Dr. Claudia Kappen, Department of Biochemistry and Molecular Biology, Mayo Clinic Arizona, 13400 East Shea Boulevard, Scottsdale, AZ 85259 USA. E-mail: kappen@mayo.edu. Mayo Clinic Arizona is an Affirmative Action Employer and Educator.**

POSITIONS OPEN



BIOMIRA
The Cancer Vaccine People

**RESEARCH SCIENTIST
TUMOR BIOLOGY**

Biomira Inc. is a biotechnology company committed to the development of therapeutic vaccines and innovative strategies for immunotherapeutic treatment of cancer.

Biomira USA Inc., a wholly owned subsidiary of Biomira Inc. (Edmonton, Alberta, Canada), has an opening for a Research Scientist at its facility in Cranbury, New Jersey. The qualified candidate will be responsible for design, execution, and evaluation of studies involving animal tumor models and cellular immunology assays. Must possess excellent oral, written, and interpersonal skills and be able to work in a dynamic, team-oriented environment. The successful candidate will have a Ph.D. in immunology or a related field with five-plus years of postdoctoral or industrial work experience in tumor biology, vaccine development, and immunochemical and immunofluorescent techniques. Please send résumé to: **Human Resources Department, Biomira USA Inc., 1002 Eastpark Boulevard, Cranbury, NJ 08512. FAX: 609-655-1755; e-mail: hr.biouisa@biomira.com. Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS. Department of Pathology, Texas A&M University Health Science Center. Two positions are immediately available to study novel and known genes that are relevant in blood vessel formation and regression. We have developed *in vitro* models of human capillary morphogenesis and apoptosis in three-dimensional extracellular matrix and have identified novel and known genes that are differentially expressed during these events. This work is an NIH-funded collaborative effort between the laboratories of **Dr. George Davis** and **Dr. Steve Maxwell**. A strong background in molecular, cellular, and biochemical techniques is required. Send research interests, curriculum vitae, and contact information for three references to: **Dr. George Davis, Department of Pathology, Texas A&M University Health Science Center, 208 Reynolds Medical Building, College Station, TX 77840-1114. Telephone: 409-845-0823; FAX: 409-862-1299; e-mail: gedavis@tamu.edu.**

MEDICINE: HEMATOLOGY/ONCOLOGY

RESEARCH ASSOCIATE. Experimental cancer therapies. The Experimental Therapeutics Program at the University of Virginia is seeking a scientist to join a team dedicated to the development of nontoxic approaches to cancer therapy. Research will focus on mechanics of action of aromatic fatty acids, with emphasis on nuclear receptors and early response genes. Ph.D. with strong background in tumor cell and molecular biology required. Send curriculum vitae to: **Dr. Dvorit Samid, University of Virginia, Jordan Hall, Box 513, Charlottesville, VA 22908. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE positions for molecular, biochemical, and transgenic studies of nuclear receptors/associate proteins and opioid receptors in developing animals. Experience in molecular and biochemical methods is desirable. Background in neurobiology is a plus. Send curriculum vitae and names of three references to: **Dr. Li-Na Wei, Department of Pharmacology, University of Minnesota Medical School, 435 Delaware Street S.E., Minneapolis, MN 55455. FAX: 612-625-9402; e-mail: weix009@maroon.tc.umn.edu.**

POSTDOCTORAL POSITION to study redox and calcium regulation of gene expression in rodent cardiac myocytes. Applicants should have Ph.D. in biochemistry or molecular biology with extensive background in practical and theoretical aspects of RT-PCR; experience in differential display analysis and/or single-cell RT-PCR preferred. Contact: **Dr. Y. J. Suzuki, Antioxidants Research Laboratory, USDA Human Nutrition Research Center, Tufts University, 711 Washington Street, Boston, MA 02111. FAX: 617-556-3344.**

POSITIONS OPEN

MOLECULAR BIOLOGIST

Baylor University, a private, comprehensive university of 12,000 students, seeks a Molecular Biologist for a tenure-track position at the **ASSISTANT PROFESSOR** level beginning summer 1999. Applicants must have a Ph.D. degree and be using current and innovative approaches to examine biological processes. Position responsibilities: (1) teach an upper-level course in embryology/developmental biology, teach introductory biology for majors, and develop and teach an upper-level course in area of specialty; (2) establish a research program involving undergraduate and graduate students; and (3) participate in departmental and university service activities. Baylor is renowned for excellence in teaching, balanced with quality faculty and student research. Submit, by 5 October 1998, application letter, curriculum vitae, statements of teaching philosophy and research interests, graduate and undergraduate transcripts, and names and addresses of three references to: **Dave Eldridge, Search Committee Chair, Department of Biology, Baylor University, Waco, TX 76798-7388. Telephone: 254-710-2911; FAX: 254-710-2969; e-mail: david_eldridge@baylor.edu; website: <http://www.baylor.edu>. Baylor University is a Baptist university affiliated with the Baptist General Convention of Texas. As an Affirmative Action/Equal Employment Opportunity Employer, Baylor encourages minorities, women, veterans, and persons with disability to apply.**

POSTDOCTORAL POSITIONS

Postdoctoral positions are available to study the biochemistry and molecular biology of DNA replication and recombination in the bacteriophage T4 system. Candidates with a Ph.D. and experience in chemistry, biochemistry, or related fields are sought for a project involving biophysical studies of protein-DNA complexes, using techniques including fluorescence spectroscopy, analytical ultracentrifugation, and X-ray crystallography. Candidates with a Ph.D. and experience in biochemistry, molecular biology, or related fields are sought for a project involving *in vitro* reconstitution of recombination-dependent DNA synthesis and repair reactions. Send curriculum vitae, a description of research experience and interests, and three letters of recommendation to: **Dr. Scott W. Morricca, Department of Biochemistry, College of Medicine, University of Vermont, Burlington, VT 05405. FAX: 802-862-8229; e-mail: smorricca@zoo.uvm.edu.**

POSTDOCTORAL POSITIONS available to study RNA splicing, RNA stability, and translational regulation (see review: *Immunity* 8:135, 1988). Opportunity to train in immunology (TCR regulation) and the gene expression field. Seek motivated persons with backgrounds in molecular biology. Send curriculum vitae to: **Miles F. Wilkinson, Department of Immunology, University of Texas M. D. Anderson Cancer Center, Box 180, 1515 Holcombe Boulevard, Houston, TX 77030. E-mail: mwilkins@notes.mdacc.tmc.edu.**

A **POSTDOCTORAL POSITION** is available to study antioxidant metabolism in mutants of *Chlamydomonas reinhardtii*, a model photosynthetic eukaryote. Expertise in molecular genetics and biochemistry is required. Please send letter of application, curriculum vitae, and names and addresses of three references to: **Dr. Krishna K. Niyogi, Department of Plant and Microbial Biology, 111 Koshland Hall, University of California, Berkeley, CA 94720-3102. FAX: 510-492-4995; e-mail: niyogi@nature.berkeley.edu.**

POSTDOCTORAL POSITION in molecular biology of nuclear hormone receptors, primarily studying mechanisms of gene regulation by thyroid hormone, retinoid, and steroid receptors. Experience in molecular biology is required. Send curriculum vitae and letters of reference to: **Dr. Ronald Koenig, University of Michigan Medical Center, 1150 West Medical Center Drive, Ann Arbor, MI 48109-0678. FAX: 734-936-6684; e-mail: rkoenig@umich.edu. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to investigate mutagenicity of benzene metabolites in cell lines transfected with lambda/lacI shuttle vector. Demonstrated experience in mutation analysis or molecular biology including cellular transfections, plasmid construction, and PCR analysis is required. Send curriculum vitae to: **Dr. W. J. Bodell, University of California, San Francisco, Box-0806, San Francisco, CA 94143-0806. E-mail: bodell@itsa.ucsf.edu. UCSF is an Equal Opportunity Employer.**

Chief Scientist to Lead Research in Condensed Matter Science

Permanent Position

The Institute of Physical and Chemical Research (RIKEN)

RIKEN invites applications for the position of Chief Scientist to lead a new laboratory working on experimental study of physics and/or chemistry of condensed matter. While applications from overseas applicants are welcome, the position requires Japanese ability. The successful candidate will be responsible for the laboratory's overall management, research strategy, and directing research projects. They will also be responsible for more general aspects of RIKEN's management and research planning activities. Applicants should have appropriate research experience supported by relevant publications. The post is a permanent appointment, subject to RIKEN's mandatory retirement age of 60. Terms and conditions of employment shall include a director-level salary and be in accordance with RIKEN's procedures for appointing Chief Scientists. RIKEN expects that the successful applicant will preferably be able to take up this position from April 1, 1999.

Applicants should send a full curriculum vitae and photograph; list of publications; a copy of five key publications; a statement explaining present research experience, reasons for their application and proposals for research at RIKEN (these should not exceed five sides of A4-sized paper); and the names and addresses of three referees. Further details are available from the address below. All applications should reach RIKEN by September 30, 1998. Applicants should address all correspondence to Dr. Koichi Katsumata, Head of the Chief Scientist Nominating Committee, Magnetic Materials Laboratory, The Institute of Physical and Chemical Research (RIKEN), Wako, Saitama 351-0198 Japan. Tel: +81-48-467-9348, Fax: +81-48-462-4649, E-mail: katumata@postman.riken.go.jp. Information about RIKEN is available on website (<http://www.riken.go.jp/>).

國立陽明大學 徵求校長候選人啟事

國立陽明大學現有醫學院、醫學技術暨工程學院、生命科學院、護理學院暨通識教育中心，為一以醫學為主之綜合大學，計有大學部七系，學生 1,964 人；二十二個研究所，碩士班 524 人，博士班 229 人，全部合計 2,717 人。本校設備新穎，師資優良，教學及研究成果已深獲國內外肯定，近年更極力推展教學改進及通識教育，提昇校園人文氣氛。因現任校長將於明年六月任期屆滿，故擬廣徵賢達，凡曾任大學教授五年以上、德學崇隆、行政能力卓越、教育理念清晰，就職時年齡未及六十五歲者，皆歡迎自薦或由他人推薦為候選人。請將候選人簡歷及推薦人之聯絡地址電話於 1998 年 9 月 10 日前寄至：

『台北市北投區石牌國立陽明大學行政大樓校長遴選委員會』收。

TEL: 886-2-2823-7801

FAX: 886-2-2823-7583

E-mail: psc@ym.edu.tw

註：有關校長遴選之資料及學校簡介，請向上述遴選委會索取。

Dr.Reddy's



RESEARCH FOUNDATION

Good People • Good Science • Good Medicines

OUTSTANDING SCIENTISTS FOR DRUG DISCOVERY RESEARCH

Promoted by the companies of Dr. Reddy's Group, Dr. Reddy's Research Foundation (DRF) is the leading pharmaceutical R & D company in India. We have two New Chemical Entities in clinical development and several promising candidates in our pipeline. At this stage we are poised to enter an exciting period of sustained growth in the scope of our activities. We are looking for suitable candidates to fill positions at different levels in the following areas of research. All these positions are based at our state-of-the-art research campus at Miyapur, Hyderabad, Andhra Pradesh, India.

COMBINATORIAL CHEMISTRY

We seek candidates with a successful track record of performance in the area of Organic Chemistry with good knowledge of polymer chemistry. The selected candidate will be responsible for solving Combinatorial Chemistry problems in support of Drug Discovery. Hands-on experience in advanced chemistry techniques or solid phase automated synthesizer is desirable. The position requires a Ph.D. degree in Organic Chemistry with sound knowledge of polymer chemistry and experience in drug discovery research.

MEDICINAL CHEMISTRY / ORGANIC CHEMISTRY

The successful candidates will join our drug discovery team. This position requires a Ph.D. in Chemistry with 3 years of Postdoctoral experience in Medicinal Chemistry or Organic Synthesis. Exposure to biological aspects of the drug discovery process and team skills are important. Candidate must have the capability to plan and execute multiple synthetic transformations as needed for preparation of novel small molecule therapeutic agents.

MOLECULAR MODELLING

The successful candidate will have Ph.D. in Computational Chemistry/Medicinal Chemistry with 3 years of experience in protein and small molecule modelling. Experience with commercial modelling software packages such as SYBYL and Biosym is required. Additional experience with QSAR and molecular diversity analysis is desirable. The selected candidate will have the opportunity to interact with Medicinal Chemists, Biologists, and Pharmacologists. Ability to work in a multidisciplinary environment is essential.

MOLECULAR BIOLOGY

We have a challenging opportunity for a scientist with Molecular and Cellular Biology expertise to join our Pharmacology group. The selected candidate will be responsible for identifying and exploiting new targets, particularly in the areas of Diabetes, Obesity, Cancer, and Inflammation. This critical position will require practical experience in methods to characterize mRNA, Protein expression levels for Mammalian Tissues, Generation of stable cell lines and construction of Mammalian reporter systems. Qualified candidate will possess Ph.D. in Molecular Biology or equivalent and a minimum of three years of Postdoctoral experience, preferably in the Pharmaceutical or related sectors, would be an added advantage.

MOLECULAR PHARMACOLOGY

For this position we are looking for a Ph.D. with 3-4 years of experience in different areas of receptor biology such as receptor cloning, purification, expression, binding, and functional characterization. You will use these tools as aids in understanding and qualifying drug action in our target-based discovery program. For this position your flexibility in designing new assay systems and some exposure in an industrial setting will be highly desirable.

DRUG METABOLISM AND DISPOSITION

We are looking for a Ph.D. to lead our DMPK efforts in providing support to our Drug Discovery and Development groups. We prefer candidates with some industrial experience, as well as technical expertise in one or more of these areas: bioanalytics (including LC-MS/MS for identifying and characterizing drug metabolites), *in vitro* methods for assessing drug metabolism and the use of radiolabeled drugs for metabolism and tissue distribution studies. Using a team-based approach you will interact with scientists from a range of disciplines, ranging from Medicinal Chemistry to Clinical Research, in helping solve problems in the DMPK assessment of new molecules.

For all positions excellent oral and written communication skills are essential.

For more information about DRF, please visit the corporate website at: <http://www.drreddys.com/drfr>.

For confidential consideration, please send résumé indicating two references to:

Sr. Manager - HRD & MIS

Dr. Reddy's Research Foundation

7-1-27, Ameerpet, Hyderabad - 500 016,

A.P., India. Fax : 91-40-3045007; E-mail : drf@hd1.vsnl.net.in

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP OPPORTUNITY IN NEURAL REGULATION OF PROTEASOMAL PROTEOLYSIS

The Laboratory of Developmental Neurobiology, Division of Intramural Research, National Institute of Child Health and Human Development (NICHD), is seeking applications for two Postdoctoral Fellowship positions to study the neural control of proteasomal degradation of the melatonin rhythm enzyme, serotonin N-acetyltransferase (*Science* 279:1358, 1998). Applicants must possess a Ph.D. and/or M.D., and less than five years of postdoctoral experience. U.S. citizenship is not required. Applicants should have relevant expertise in protein chemistry.

Interested applicants should submit a curriculum vitae, bibliography, and the names of three potential referees to be received by the closing date, October 23, 1998, to: Dr. David Klein, Laboratory of Developmental Neurobiology, National Institute of Child Health and Human Development, National Institutes of Health, Building 49, Room 6A82, 49 Convent Drive MSC 4480, Bethesda, MD 20892-4480. E-mail: klein@helix.nih.gov. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITIONS are available to study the role of retinoic acid receptors in mouse development and postnatal physiology. We have established knockout and conditional (cre/lox) mutations in the receptor genes in the mouse germline, and are now exploring the molecular basis of the resulting phenotypes using biochemical and genetic approaches. The cardiovascular system, liver, skin, and neural crest are of particular interest. The Investigator's laboratory is in newly constructed research space in the University of Southern California Institute for Genetic Medicine and is very well funded. Apply to: Dr. Henry M. Sucov, University of Southern California, 2250 Alcazar Street, IGM 240, Los Angeles, CA 90033. FAX: 323-442-2764.

POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Field of vascular biology and/or obesity. Study the role of leukocyte and platelet adhesion receptors in thrombosis, inflammation, atherosclerosis, and adipogenesis. Prefer candidates with experience in molecular biology and/or working with mice. Publications in international journals are a prerequisite. Curriculum vitae to: Denisa D. Wagner, Ph.D., Professor of Pathology, Harvard Medical School, The Center for Blood Research, 800 Huntington Avenue, Boston, MA 02115. FAX: 617-278-3368. An Equal Opportunity Employer.

Two **POSTDOCTORAL POSITIONS** available immediately (1) to study the biochemistry of protein hormone receptors, and (2) to isolate and characterize novel genes involved in estrogen-induced apoptosis. Experience in molecular and cellular biology required. Good command of written and spoken English skills also required. Contact: Dr. Ana Soto, M.D., Cell Biology, Tufts Medical School, 136 Harrison Avenue, Boston, MA 02111. E-mail: asoto@infonet.tufts.edu; FAX: 617-636-6536.

POSTDOCTORAL FELLOWSHIP in cell and molecular biology available now for work on the molecular mechanisms involved in fracture healing. Experience in bone biology, immunocytochemistry, and *in situ* hybridization highly desirable. Salary and benefits competitive; possible long-term position. Send résumé, cover letter, and names of three references to: Ms. MacMurray, Loma Linda University, P.O. Box 7210, Loma Linda, CA 92354.

Three-year **POSTDOCTORAL RESEARCH** position available immediately at the National Institutes of Health (NIH) in Phoenix, Arizona, to identify and characterize type 2 diabetes susceptibility genes. Experience in molecular biology required. Send curriculum vitae and a summary of relevant experience to: Dr. Leslie Baier, Clinical Diabetes and Nutrition Section, NIDDK, NIH, 4212 North 16th Street, Phoenix, AZ 85016. FAX: 602-200-5225.

POSTDOCTORAL POSITION available immediately to study transcriptional control of male germ cell differentiation. An additional position also available to study neuronal differentiation. Contact: Dr. Daniel L. Kilpatrick, Department of Physiology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655. FAX: 508-856-5997; e-mail: daniel.kilpatrick@ummed.edu; website: www.ummed.edu/dept/physiology/kilpatrick.htm.

POSITIONS OPEN

POSTDOCTORAL POSITIONS MARINE BIOMEDICAL RESEARCH

The Whitney Laboratory, a center for marine biomedical research in the University of Florida, announces the availability of postdoctoral training in the areas listed below. The Laboratory is exceptionally well equipped for research in cell and molecular biology using marine animals in a highly interactive research and training environment.

Barry W. Ache: functional organization of olfactory glomeruli.

Peter A. V. Anderson: structure and function of calcium channels.

Barbara-Anne Battelle: molecular mechanisms underlying circadian changes in retinal function.

William R. Harvey: molecular physiology of invertebrate epithelia.

Dietmar Kultz: intracellular signaling in response to osmotic stress.

Paul J. Linser: regulation of differential gene expression in vertebrate eye development.

Leonid Moroz: nitric oxide and other transmitters in marine invertebrates.

Further information about the Laboratory, details of the positions, and application instructions are available at our website: www.whitney.ufl.edu. The University of Florida is an Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** is available in a research program in the Departments of Psychiatry, Pathology, and Pediatrics at UCLA. Studies will focus on the expression of Arginases I and II (AI and AII) in various tissues, cells, and cell lines in normal and AI and AII knockout animals. The consequences of normal and abnormal arginase expression *in vitro* and *in vivo* will be studied, and efforts will be directed toward understanding the mechanism of brain damage in hyperargininemia due to AI deficiency. A background and interest in cell biology and molecular biology is desirable. Experience in neuroscience is a plus. Salary is appropriate to background and experience, at the UCLA norms. If interested, please FAX résumés to: Ramaswamy Iyer, Ph.D., FAX: 310-206-0657; e-mail: riyer@pathology.medsch.ucla.edu. UCLA is an Equal Opportunity Employer.

A **POSTDOCTORAL POSITION** is available in the Department of Pathology of the University of Michigan starting after September 1, 1998. The research studies pulmonary inflammation in response to allergens using a mouse model of asthma. Modulation of the response will be done using specific cytokine inhibitory strategies. The candidate should have experience in basic methods of molecular biology and handling mice. Knowledge of cytokines, including methods to measure the cytokines, is also desirable. Send curriculum vitae and three references to: Daniel Remick, M.D., M2210 Med Sci I, 1301 Catherine Road, Ann Arbor, MI 48109. E-mail: remickd@umich.edu.

POSTDOCTORAL POSITION

Postdoctoral position available to study the molecular role of cytokines in viral neuropathogenesis. Candidates with expertise in molecular virology, neurovirology, or neuroimmunology will be favored. Please send curriculum vitae, statement of research interest, and three letters of recommendation to: Dr. Gail Lewandowski, Director of Virology, Virion Systems, Inc., 9610 Medical Center Drive, Suite 100, Rockville, MD 20850. An Equal Opportunity Employer.

POSTDOCTORAL POSITION for a recent Ph.D. graduate in molecular biology and genetics to elucidate mechanisms of drug and environmental chemical toxicity related to oxidative stress, DNA damage and repair. Background in toxicology is not necessary. Areas include teratogenesis, cancer, and neurodegenerative diseases. For Canadian citizens and landed immigrants. E-mail curriculum vitae and three references to: Peter G. Wells, Faculty of Pharmacy, University of Toronto, Canada, e-mail: pg.wells@utoronto.ca.

POSTDOCTORAL POSITIONS are available immediately to study aspects of tumorigenesis, cell cycle, signal transduction and transcription in a spectacular southwest setting. Applicants should be skilled in molecular biology, tissue culture, or biochemistry. Send curriculum vitae and names of three references to: Scott A. Ness, Ph.D., Department of Molecular Genetics and Microbiology, University of New Mexico Health Sciences Center, Albuquerque, NM 87131-5276.

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE

The Louisiana State University Medical Center Department of Pediatrics has an immediate opening for a Postdoctoral Associate to do research in cancer immunology and immunotherapy. M.D. or Ph.D. required. The candidate will develop collaborative research with other investigators in T cell function, T cell anergy induced by cancer, and signal transduction changes in T cells. The candidate will also participate in the development of models for immunotherapy and clinical trials. Preference will be given to candidates with experience in immunology/molecular biology research. Please send résumé and names and addresses of three references by October 15, 1998, to: Dr. Augusto Ochoa, Associate Professor, Louisiana State University School of Medicine, 2020 Gravier Street, New Orleans, LA 70112. Telephone: 504-599-0914, section 0911; FAX: 504-568-6330. LSUMC is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION in cytokine signaling and hematopoiesis, Penn State. Using unique *in vitro* and *in vivo* modeling systems, opportunities are available (i) to investigate the roles of recently cloned novel cytokine response genes during erythropoietin (and hematopoietic growth factor) regulated blood cell development (especially erythropoiesis), and (ii) to participate in Penn State's programs in cell and development biology, biochemistry and molecular biology, and veterinary science. Send statement of interests and résumé to: Dr. D. M. Wojchowski, 126 ASI Building, Penn State, University Park, PA 16802. FAX: 814-863-6140; e-mail: dmw1@psu.edu. Affirmative Action/Equal Opportunity Employer.

Three **POSTDOCTORAL POSITIONS** in immunology and molecular biology of parasitic protozoa are available in the Division of Infectious Diseases, Tufts University School of Veterinary Medicine. Two positions require a background in immunology and one in molecular biology. The Division has a primary interest in human enteric infections and is located on the Tufts University School of Veterinary Medicine campus, 35 miles west of Boston. Please send curriculum vitae and the names of three references to: Dr. Donna Akiyoshi, Laboratory Supervisor, 200 Westboro Road, North Grafton, MA 01536. FAX: 508-839-7977; e-mail: dakiyoshi@infonet.tufts.edu.

POSTDOCTORAL POSITION. Research in the laboratory of Dr. B. Engelward, Division of Bioengineering and Environmental Health at MIT is focused on DNA damage, repair, and recombination in mammals. Chemical, molecular, and genetic approaches are used to reveal mechanisms of repair and consequences of damage. Ph.D. in chemistry, biochemistry, biology, or related field is required. One year of support guaranteed; additional support available if mutually agreeable. Contact: e-mail: bevin@mit.edu; website: http://web.mit.edu/beh/bevin_lab. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS are available to study (1) posttranscriptional regulation of DNA topoisomerase II in anticancer drug resistance; (2) chemoprevention of leukemia induced by the anticancer agent etoposide. A background in molecular pharmacology and/or free radical biochemistry is desirable. Send a curriculum vitae and the names of three references to: Jack C. Yalowich, Ph.D., Department of Pharmacology, University of Pittsburgh, Biomedical Science Tower W1355, Pittsburgh, PA 15261. E-mail: yalowich+@pitt.edu.

A **POSTDOCTORAL POSITION** is available to study the function and regulation of the MDM2 oncogene. A Ph.D. degree in molecular biology or biochemistry is required. Please send curriculum vitae and letters of recommendation to: Dr. Jiandong Chen, Department of Microbiology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112. E-mail: jchen@lsu.edu; website: www.lsumc.edu/campus/micr/jdc.htm. LSUMC is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to study the role of TGF- β signaling pathway in hereditary colorectal colon cancer (HNPCC). Candidate should have a Ph.D. or a M.D.-Ph.D. degree with a strong background in molecular biology and biochemistry. Send curriculum vitae and the names of three references to: Dr. Bo Liu, University of Pittsburgh Cancer Institute, E1047BST, Pittsburgh, PA 15213. FAX: 412-624-7737; e-mail: liub@msx.upmc.edu.

EXPERIMENTAL MARINE ECOLOGIST

The Hopkins Marine Station of Stanford University invites nominations and applications at the Assistant or Associate Professor level in the area of Experimental Coastal Marine Ecology. We especially seek candidates who will take advantage of the marine environment in the Hopkins Marine Life Refuge, which lies within the Monterey Bay National Marine Sanctuary. This position is in Stanford's Department of Biological Sciences with residence at the Hopkins Marine Station.

The successful candidate will be expected to develop a dynamic research program, and to participate in the undergraduate and graduate teaching programs at the Marine Station and develop new courses in marine ecology. *Women and minority scientists are especially encouraged to apply.*

Applicants should send a curriculum vitae, bibliography, a brief statement about their research and teaching interests, and the names and addresses of three to five references to:

Professor Mark Denny
Chair of Ecology Search

Stanford University, Hopkins Marine
Station, Ocean View Blvd.
Pacific Grove, CA 93950

For full consideration, materials should be received by October 15, 1998. This appointment would begin on September 1, 1999.

Information about the Hopkins Marine Station is available at the website: <http://www-marine.stanford.edu/>.

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FACULTY APPOINTMENTS DEPARTMENT OF BIOLOGICAL SCIENCES NATIONAL UNIVERSITY OF SINGAPORE

Applications are invited for faculty appointments in the Department of Biological Sciences. Candidates should possess a Ph.D. degree or its equivalent and have proven ability in research with postdoctoral experience in any of the following areas:

Plant Ecology

Candidates should preferably have experience in teaching and research on tropical flora and vegetation; and be able to lead students on field studies on the major vegetation types in Singapore and nearby countries. Knowledge of computational/mathematical ecology and/or molecular/chemical ecology is an advantage, and the successful candidate is expected to initiate a research program in plant ecology.

Plant Physiology

Candidates should have experience in teaching and research in plant physiology. Knowledge of orchid physiology is a definite advantage and the successful candidate is expected to contribute significantly to orchid biology research.

Marine Biology

Candidates should preferably have experience in teaching and research in tropical marine biology and/or marine aquaculture. Experience relevant to Southeast Asia will be an advantage. Candidates are to contribute to the Department's research strength in marine biology/marine aquaculture.

Appointees must have the ability to build active research programs, and an enthusiasm and interest in student learning. Besides appointments on normal 3-year contracts with the possibility of tenure, **visiting appointments** for one or two years will also be considered.

Gross annual emoluments range as follows:

Assistant Professor	S\$ 58,800 – 100,440
Associate Professor	S\$125,640 – 177,840
Professor	S\$149,760 – 211,200

(US\$1.00 = S\$1.69 approximately)

In addition, a 13th month Annual Allowance (of one month's salary) and an Annual Variable Component (of normally 2 months' salary) may be payable at year end, under the flexible wage system, to staff on normal contracts. The commencing salary will depend on the candidate's qualifications, experience, and the level of appointment offered.

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance, subsidized housing, education allowance for up to three children subject to a maximum of S\$16,425 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain consultation fees up to a maximum of 60% of their gross annual emoluments in a calendar year.

All academic staff will be given a networked personal computer with access to a Cray supercomputer, UNIX hosts, departmental laser printers, a wide spectrum of software, on-line library catalogue, CD-ROM database, Video-on-Demand, INtv, and Internet. The Department is well equipped with sophisticated instruments including EM facilities, amino acid analyser, automated DNA sequencer, confocal laser microscope, CD spectropolarimeter, LC/MS/Mass spectrometer, molecular modeling workstations, and protein sequence. The Department also has facilities such as aquaria, experimental gardens, a tropical plant herbarium, Microbial Culture Collection, Plant Tissue Culture Collection, and the Zoological Reference Collection (ZRC). The ZRC houses almost 300,000 specimens and is one of the finest research museums in the region/world. The Department has about 43 faculty members, very active in research, and is one of the strongest Biology Departments in Asia.

Please send your curriculum vitae by fax or e-mail to:

Prof. T. J. Lam

Head

**Department of Biological Sciences
National University of Singapore**

Kent Ridge Crescent

Singapore 119260

FAX: (65) 779 2486

E-mail: dbshead@nus.edu.sg

Closing date of application: 30 September 1998

Only shortlisted candidates will be notified.

POSITIONS OPEN

POSTDOCTORAL POSITION WASHINGTON STATE UNIVERSITY

Two Postdoctoral positions (one Enzymologist, one Plant Molecular Biologist). Enzymologist candidate will be proficient in enzyme mechanisms, whereas Plant Molecular Biologist candidate will be proficient in standard molecular biology and plant transformation techniques. Both will have a degree in molecular biology, biochemistry, chemistry, or related field. Will involve research on phenylpropanoid-coupling mechanisms, and postcoupling modifications. Applicants must have good research, writing, and communication skills, and can work independently. Appointment up to three years; salary commensurate with experience. Applications from July 1998 onwards until suitable person is identified. Cover letter, curriculum vitae, and three letters of recommendation to: Dr. Norman G. Lewis, Institute of Biological Chemistry, Washington State University, P.O. Box 646340, Pullman, WA 99164-6340. E-mail: lewisn@wsu.edu; Telephone: 509-335-8382; FAX: 509-335-8206. Washington State University is an Equal Opportunity Employer.

POSTDOCTORAL POSITIONS. University of North Carolina-Greensboro. Postdoctorates (two to three) in plant biotechnology are anticipated to be available in Neal Stewart's laboratory for soybean transformation and GFP research (funding pending). B.S. and M.S.-level Technicians may also apply for related positions. A Postdoctoral position in aquatic ecology is available in Anne Hershey's laboratory to perform research in arctic Alaskan lakes and streams. Positions could be available as soon as October 1998. Interested applicants should send a curriculum vitae and the names and addresses of three references by September 15, 1998, to: Neal Stewart/Anne Hershey, Department of Biology, University of North Carolina-Greensboro, Greensboro, NC 27402-6174. For more information e-mail: nstewart@goodall.uncg.edu or anne_hershey@uncg.edu. Affirmative Action/Equal Opportunity Employer.

A **POSTDOCTORAL FELLOWSHIP** position is available in a receptor biology laboratory to investigate molecular mechanisms of signal attenuation in erbB-expressing cells. The candidate must have U.S. citizenship/permanent residency with experience in biochemical and molecular biology techniques. Interested candidates should send their curriculum vitae with names of two references to: Dr. Donald M. O'Rourke, Departments of Neurosurgery and Pathology and Laboratory Medicine, 252 John Morgan Building, University of Pennsylvania School of Medicine, Philadelphia, PA 19104. E-mail: orourke@mail.med.upenn.edu; FAX: 215-898-2401.

The University of Pennsylvania is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS

Michigan Society of Fellows Postdoctoral Fellowships program is offering three-year Fellowships at the University of Michigan to begin September 1999. Annual stipend will be \$36,000. Application postal deadline: October 9, 1998. For information and applications, contact: Society of Fellows, 3030 Rackham Building, University of Michigan, 915 East Washington Street, Ann Arbor, MI 48109-1070. E-mail: society.of.fellows@umich.edu; website: www.rackham.umich.edu/Faculty/society.htm.

POSTDOCTORAL POSITION available immediately to study genomic instability, genetic cancer predisposition syndromes, and DNA repair with emphasis on Fanconi anemia proteins (*Nature Genetics* 17:487, 1997). Experience in cell culture, molecular biology, and protein biochemistry desired. Send or e-mail curriculum vitae and references to: Dr. Gary Kupfer, Department of Microbiology, 7th Floor, Jordan Hall, University of Virginia Health Sciences Center, Charlottesville, VA 22903. E-mail: gary_kupfer@dfci.harvard.edu.

POSTDOCTORAL POSITION to study molecular mechanisms of corneal wound healing and infections. Experience in glycobiology and/or molecular biology is preferred. Applicants should send a curriculum vitae along with names of three references to: Dr. N. Panjwani, Department of Ophthalmology, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111. FAX: 617-636-0348; e-mail: npanjwani@infonet.tufts.edu.

POSITIONS OPEN



POSTDOCTORAL RESEARCH ASSOCIATE IN CELL SIGNALING

Two positions (one Senior, one Junior) are available immediately to study G-protein control of differentiation and tyrosine kinase regulation of G-protein linked receptors using microinjection, transgenic mouse, and mutagenesis techniques. View website: www.pharm.sunysb.edu. Ph.D. and experience in molecular biology/cell signaling required. Send curriculum vitae and letters of reference via FAX or e-mail to: Dr. Craig C. Malbon, Pharmacology, University Medical Center, SUNY/Stony Brook, NY 11794-8651. FAX: 516-444-7696; e-mail: craig@pharm.som.sunysb.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITIONS

Positions available in a multidisciplinary training program to study Ca^{2+} /calmodulin-dependent myosin light chain kinase and myosin phosphorylation in smooth muscle contractility and nonmuscle cell motility. Biophysical, biochemical, cell biology, molecular genetics, and muscle physiology techniques are used to examine the regulation and functions of these proteins in relation to second messenger pathways. Opportunity to design unique training program based on previous experience. Please address inquiries to: James T. Stull, Ph.D., Department of Physiology, The University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75235-9040. Telephone: 214-648-6849; FAX: 214-648-2974; e-mail: jstull@mednet.swmed.edu. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS. Division of Cardiology, Johns Hopkins Medical Institutions. Two to three full-time Postdoctoral positions for Ph.D.'s are available immediately. Applicants must be naturalized U.S. citizens or permanent residents. Research background may include vascular mechano-cellular signaling, heart failure, molecular and cellular/muscle biology, cellular and cardiac gene-transfer, cellular and molecular electrophysiology, and ischemia/vascular pathobiology. Address inquiries, curriculum vitae, and three references to: David A. Kass, M.D., Johns Hopkins Medical Institutions, Division of Cardiology, Halsted 500, 600 North Wolfe Street, Baltimore, MD 21287. Telephone: 410-955-7153; e-mail: dkass@eureka.wbme.jhu.edu. Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** is available to study the molecular biology, regulation, and enzymology of vitamin-K and coenzyme-Q biosynthesis. Strong background in molecular biology and biochemistry required. Experience in site-directed mutagenesis, overexpression, and characterization of proteins would be helpful. For recent publications from this laboratory see website: <http://www.bios.niu.edu/meganathan/meganathan.html>.

Send curriculum vitae and three references to: Dr. R. Meganathan, Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115. E-mail: rmeganathan@niu.edu. Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** is available immediately to study the mechanism of regulation of neuropeptides involved in brain control of energy balance and/or reproduction. Molecular, biochemical, and pharmacologic approaches *in vivo* are used. Applicant should have a strong background in gene expression, gene therapy, and molecular biology and signal transduction. Send curriculum vitae, a brief statement of research training, and three references with e-mail addresses to: Satya P. Kalra, Ph.D., Department of Neuroscience, College of Medicine, University of Florida, Gainesville, FL 32610-0244.

POSTDOCTORAL and GRADUATE RESEARCH in antisense DNA therapy of tumors induced by activated c-myc oncogene in mice, and in site-specific gene therapy with nonviral vectors, for permanent residents or U.S. citizens with excellent interpersonal and communication skills. Contact: Prof. Eric Wickstrom, Thomas Jefferson University, Philadelphia, PA 19107. E-mail: eric.wickstrom@mail.tju.edu. Equal Opportunity Employer/Affirmative Action.

POSITIONS OPEN

POSTDOCTORAL POSITION TRANSGENIC MICE/SIGNAL TRANSDUCTION Baylor College of Medicine

A Postdoctoral position is available to study mammalian development and reproduction and the TGF- β signal transduction cascade using transgenic mice (see: *Nature* 374:354-363, 1995; *Nature* 383:531-535, 1996; *Nature Genetics* 15:201-204, 1997; *Nature* 391:489-492, 1998). Applicants should hold a Ph.D. or an M.D.-Ph.D. by the time the position begins. The position requires strong training in biochemistry and/or molecular biology. Please send a curriculum vitae to:

Martin M. Matzuk, M.D., Ph.D., Professor
Department of Pathology and
Developmental Biology Program
Baylor College of Medicine
One Baylor Plaza
Houston, TX 77030
E-mail: mmatzuk@bcm.tmc.edu

Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.

SENIOR POSTDOCTORAL POSITIONS AVAILABLE AT SLOAN-KETTERING INSTITUTE

Seeking Research Scientists with several years of postdoctoral experience to define the role of AML1, ETS, or bZIP transcription factors in normal and leukemic hematopoietic cell survival and differentiation. Applicants should have considerable expertise in the creation and analysis of knockout or transgenic mice, in differential molecular cloning techniques, or in the study of signal transduction pathways, protein-protein interactions, or cell cycle regulation. Those with expertise using *Xenopus* or zebrafish systems to study development are also encouraged to apply. A description of your research interests, curriculum vitae, and the names and telephone numbers of three references should be sent to: Dr. Stephen D. Nimer, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, Box 575, New York, NY 10021.

POSTDOCTORAL POSITIONS. The Arthropod-borne and Infectious Diseases Laboratory (AIDL) is seeking Postdoctoral Fellows in the areas of (1) mosquito transgenesis leading to the development of arthropod-borne disease resistance in mosquitoes. The candidate should be experienced in insect molecular biology and genetics, microinjection techniques, and insect husbandry and manipulation, and (2) arbovirus-arthropod vector interactions and have a strong background in virology and vector biology. Closure date: September 4, 1998. Send curriculum vitae and three references to: Dr. Kenneth E. Olson, Arthropod-borne and Infectious Diseases Laboratory, Foothills Campus, Department of Microbiology, Colorado State University, Fort Collins, CO 80523.

POSTDOCTORAL POSITION available immediately to study motoneuron alterations in mouse models of muscle atrophy and amyotrophic lateral sclerosis. Background in electrophysiology preferred. Position is funded by NASA and NIH. Send curriculum vitae, description of research experience, and three references to: Dennis Mosier, M.D., Ph.D., Department of Neurology, NB302, Baylor College of Medicine, Houston, TX 77030. E-mail: dmosier@bcm.tmc.edu; website: <http://www.bcm.tmc.edu/neurol/drm.html>; FAX: 713-798-3853. Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.

POSTDOCTORAL POSITIONS are available to study motor neuron differentiation and regeneration using molecular and transgenic approaches. Experience in molecular and/or developmental biology is preferred. Please send curriculum vitae and names of three references to: Dr. Matthew Qiu, Department of Anatomical Sciences and Neurobiology, University of Louisville School of Medicine, Louisville, KY 40202. FAX: 502-852-6228; e-mail: m0qu001@ulkyvm.louisville.edu.

POSTDOCTORAL FELLOWSHIPS are available immediately for Ph.D.'s or M.D.'s with strong research backgrounds in biochemistry or related fields for NIH-funded research that dissects the molecular mechanisms regulating enzyme function in blood clot formation and dissolution. Send curriculum vitae and names of three references to: Dr. Guy L. Reed, Harvard School of Public Health II-127, 677 Huntington Avenue, Boston, MA 02115. E-mail: reed@cvtlab.harvard.edu.



Becton Dickinson, a Fortune 500 healthcare conglomerate, seeks a Medical Director to bring a combination of experience, authoritative knowledge of medical practice, and scientific capability in cell science to the business of developing, manufacturing, and marketing a wide array of devices and systems focused on both research and clinical applications in the broad areas of oncology/hematology, immunology, immunopathology, and infectious disease. The diversity of our products and their international status

offer a stimulating career and the opportunity for extensive professional growth. As a member of the management team for the WW Immunocytometry business, you will play a significant role in interpreting the rapidly evolving field of immune and cellular science both in the United States and internationally.

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- **develop** educational materials that both present Becton Dickinson and its products to the research and clinical communities, and provide interpretations of scientific information to BD employees.

To qualify, you must be a BC / BE physician with both training and experience in clinical research. Because of the broad scope of the clinical aspects of this Business, relevant training / experience might include the disciplines of Oncology/Hematology, Immunology, Rheumatology, Infectious Disease, or Clinical/Anatomical Pathology. You must demonstrate capability in quantitative reasoning and a mastery of research methodology at the Ph.D. level. Ideally, training and/or experience would include the United States plus at least one other major region (e.g., Europe or Asia). The candidate should be steeped in trends in technology with a global perspective, and must be able to recognize new product opportunities in medical practice as well as to quantify diagnostic value in use.

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THE ONCE INTERNATIONAL R&D GRANTS

On the occasion of the 60th anniversary of the creation, the National Organisation of the Spanish Blind is pleased to announce the first biennial ONCE International Research & Development Grants, the aim of which is to promote and contribute to the development of research leading to the improvement of standard of living, social integration and integration into the labour market of blind and visually impaired persons.

The ONCE International R&D Grants will be awarded once every two years to innovations and progress of a medical, technical or technological nature which lead directly to the creation, adaptation and the use of machines or software, as well as the discovery and development of therapies or medical care, the practical application of which leads to improvements for blind and visually impaired persons.

The endowment of the ONCE International R&D Grants is of:

First Grant: Two hundred thousand dollars (thirty million pesetas)

Two accessits: Sixty five thousand dollars each (ten million pesetas)

A Board composed of recognised experts from the fields of technical devices for the blind, bio-medicine, information technology, engineering and other sciences, chaired by the President of the Royal Spanish Academy of Sciences, will evaluate the different research projects presented to this competition.

Eligible applicants are individuals or members of research centres who submit their projects collectively or on an individual basis, by the deadline and in the manner established by the Board.

Those projects presented by members of research centres must be accompanied by the corresponding authorisation from their respective authorities.

The projects are to be presented to The Secretary of the ONCE International Research & Development Grants by January 1st, 1999. The Selection Board will publish the decision of the competition on April 1st, 1999.

For further information and details please contact:

**The Secretary, The ONCE International R&D Grants,
C/ Ortega y Gasset, 18, 28006 Madrid, Spain
Tel.: 91 436 53 00 / 91 577 37 56. Fax: 91 436 53 55/9.
E-mail: efd@once.es or ramm@once.es
Internet: <http://www.once.es>**

POSITIONS OPEN

NIH PREDOCTORAL/POSTDOCTORAL FELLOWSHIPS ONCOBIOLOGY

Fellowship positions are available in the interdepartmental Oncobiology Training Program at Boston University School of Medicine. Potential research topics include genetic basis of malignancy; viral and carcinogen mediated oncogenesis; cell cycle progression and apoptosis; intracellular signaling in normal and malignant tissues; the role of adhesion molecules, growth factors, and chemokines on tumor progression and metastases; and molecular approaches to tumor therapy. Predoctoral application requirements and a more complete description of the training faculty and their research interests can be found at [website: www.bumc.bu.edu](http://www.bumc.bu.edu) (go to Division of Graduate Medical Sciences, Division Departments, Department of Microbiology, Program of Study).

Qualified Postdoctoral applicants should send a curriculum vitae, a brief statement of research interests, and the names of three references to: **Oncology Training Program, Department of Microbiology, Boston University School of Medicine, 715 Albany Street, Boston, MA 02118.** Address inquiries to e-mail: otp@bu.edu.

USM is committed to Affirmative Action/Equal Employment Opportunities and strongly encourages applications from women and minorities.

POSTDOCTORAL POSITIONS CENTER FOR ADDICTION AND MENTAL HEALTH

Two Postdoctoral positions are available immediately to study (1) oxidative stress and damage indices; and (2) dopamine receptor-G protein-adenylyl cyclase signal transduction pathway in autopsied brain of human psychostimulant users. Please send curriculum vitae, list of your two most important publications with your justification for importance, statement of research interests, and names of three to five references (preferably by e-mail) to: **Stephen Kish, Human Neurochemical Pathology Laboratory, Centre for Addiction and Mental Health, 250 College Street, Toronto, Ontario M5T 1R8 Canada.** E-mail: kishs@cs.clarke-inst.on.ca; FAX: 416-979-6871.

POSTDOCTORAL POSITION IN PRION DISEASES

A position is available to study the formation of prions, the causative agents of neurodegenerative disorders that include Creutzfeldt-Jakob and mad cow diseases, using *in vitro* systems, cultured cells, and transgenic mice. Candidates should have a Ph.D. and/or M.D., with experience in biochemical, cell biological, or histopathological techniques. Send a curriculum vitae, statement of research interests, and the names of three references to: **David A. Harris, M.D., Ph.D., Department of Cell Biology and Physiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** FAX: 314-362-7463; e-mail: dharris@cellbio.wustl.edu.

POSTDOCTORAL POSITION STANFORD UNIVERSITY

Postdoctoral position available immediately to study cellular and molecular aspects of muscular dystrophies. Projects involve signaling through dystrophin and integrin pathways, mechanisms of cellular injury and regulation of cellular defenses, and gene therapy. Experience in cell and molecular biology is essential. Send curriculum vitae, brief summary of doctoral work and research interests, and three letters of reference to: **Thomas A. Rando, M.D., Ph.D., Department of Neurology and Neurological Sciences, Stanford University School of Medicine, Stanford, CA 94305-5235.** Affirmative Action/Equal Opportunity Employer.

Human genetics **POSTDOCTORAL POSITION.** Position available for functional studies of the transcription factor encoded by PHOG/SHOX, a gene implicated in growth and skeletal development (*Human Molecular Genetics* 6:1341, 1997; *Nature Genetics* 16:54, 1997; *Nature Genetics* 19:67, 1998; *Nature Genetics* 19:70, 1998). Experience in molecular biology and excellent communications skills essential; protein background a plus. Please send curriculum vitae and names of three references to: **Jay Ellison, Ph.D., M.D., Department of Pediatrics, Box 980646, Medical College of Virginia at Virginia Commonwealth University, Richmond, VA 23298-0646.** FAX: 804-828-6455; e-mail: jwelliso@hsc.vcu.edu.

POSITIONS OPEN



Two **POSTDOCTORAL POSITIONS** available immediately to study gene expression and signal transduction in human chemokine receptors. Candidates must have a strong background in molecular biology or immunology, and preferably in receptor expression, mutagenesis, ligand binding, or G-protein subunit biochemistry. Send curriculum vitae/publications to: **Dr. Brett A. Premack, Department of Physiology and Molecular Biology Institute, MRL 3645, 675 Circle Drive, UCLA Medical Center, Los Angeles, CA 90095-1760.**

POSTDOCTORAL POSITION

Postdoctorate. Photoreceptor cell biology. Recent technical advances make it possible to advance our molecular understanding of the development of cell polarity and membrane turnover in photoreceptors. A Postdoctoral position is available to study photoreceptor membrane turnover and the role of membrane-cytoskeleton interaction. Particular emphasis is placed on membrane microtubule cross linkers in the photoreceptor cilium. The work requires application of biochemical, molecular, and cell biological techniques using photoreceptors from mammals (murine and bovine) as well as from African clawed frog. Send/FAX résumé, description of relevant research ideas, and references to: **Dr. Joseph C. Besharse, Department of Cell Biology, Neurobiology, and Anatomy, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226-0509.** Telephone: 414-456-8261; FAX: 414-456-6517; e-mail: jbeshars@mcw.edu; website: <http://www.mcw.edu/cellbio/index.html>.

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

A position is available for a Molecular Biologist interested in studying the mechanisms of microsatellite instability, mismatch-repair process in normal and chemically transformed human breast epithelial cells *in vitro*. The project will focus on the identification of new mismatch-repair genes and their relation with the process of cell immortalization and transformation. Background in tissue culture and breast cancer are highly desirable. Salary will be commensurate to successful candidate's experience. Fox Chase Cancer Center provides an attractive benefits package. The position is available immediately. Send curriculum vitae and names of three references to: **Jose Russo, M.D., Breast Cancer Research Laboratory, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** FAX: 215-728-2180. Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE THE MIAMI PROJECT TO CURE PARALYSIS University of Miami School of Medicine

Ph.D. with zero to three years of experience in a relevant field to study biochemical/molecular factors in human seminal plasma causing poor sperm motility (see: *J. Urol.* 155:1632-5, 1996). Experience in biochemical techniques required (protein purification, gel electrophoresis, ELISA, RIA). Experience in molecular biology desirable (DNA/RNA isolation, PCR, Northern blotting). Must have excellent writing and oral English skills. Salary \$22,000 to \$26,000 depending on experience. Please send curriculum vitae to: **Odessa T. Simmons, The Miami Project (R-48), P.O. Box 016960, Miami, FL 33101.** Equal Employment Opportunity/Affirmative Action.

STEM CELL AND HEMATOLOGY TRAINING CASE WESTERN RESERVE UNIVERSITY

NIH-funded **POSTDOCTORAL RESEARCH** program positions for individuals holding M.D., M.D.-Ph.D., and Ph.D. degrees. Research focus in hematopoietic and stromal stem cells, gene therapy, regulation of differentiation, marrow transplant immunology, iron metabolism, and leukemogenesis.

Send curriculum vitae, names of three references, and statement of research interest to: **Dr. Stanton Gerson, School of Medicine (BRB), Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4937.** Must be U.S. citizen or permanent resident. Minorities and women are encouraged to apply.

POSITIONS OPEN

POSTDOCTORAL SCHOLARS NORTHWESTERN DRUG DISCOVERY PROGRAM

The Northwestern Drug Discovery Program (DDP) is an academic research and training program characterized by a balanced emphasis on structure, chemistry, and biology, and a strong interface between the basic and clinical sciences (see website: <http://cam.pharm.nwu.edu/ddp/>). The DDP promotes multidisciplinary activities that improve the understanding and diagnosis of disease processes and develops fundamental knowledge and tools for intervention. Successful applicants for Postdoctoral Scholar positions will have a Ph.D., M.D., or equivalent, documented record of productivity, and outstanding potential as independent scholars. Fellows develop a customized program with sponsors at the interface of two of the three training areas (structure, chemistry, and biology), and a focus on a relevant disease. Submit a current curriculum vitae, names and addresses of three references, and a two-page research proposal to: **DDP Postdoctoral Program, c/o Dr. L. J. Van Eldik, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611-3008.**

Affirmative Action/Equal Opportunity Institution.

POSTDOCTORAL FELLOWSHIPS IN CLINICAL CHEMISTRY

University of Washington, Department of Laboratory Medicine is accepting applications for ComACC approved two-year training program. Individuals finishing the program are eligible for certification by American Board of Clinical Chemistry. Applicants (Ph.D. in basic sciences or M.D. with clinical pathology training) interested in careers in academic laboratory medicine should apply by October 1, 1998, to start training July 1, 1999. To apply or for more information contact: **Vidmantas A. Raisy, Ph.D., Department of Laboratory Medicine, Box 357110, University of Washington, Seattle, WA 98195-7110.**

University of Washington is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH POSITIONS IN MICROBIOLOGY American Society for Microbiology/ National Center for Infectious Diseases

Positions are available for Postdoctoral Scientists to conduct novel research with the overall objective of developing practical applications of microbiology, immunology, and epidemiology for diagnosis and prevention of infectious diseases. Associates will perform research in residence at the National Center for Infectious Diseases, which is headquartered at the Centers for Diseases Control and Prevention in Atlanta, Georgia.

Deadline for applications is November 15, 1998. Website: <http://www.asms.org/edusrc/edu23e.htm>; e-mail: fellowships-careersinformation@asmsa.org.

POSTDOCTORAL POSITION available to study the cellular and molecular biology of macrophage gene expression in atherosclerosis and lipoprotein metabolism. Other areas of investigation include gene therapy approaches to atherosclerosis and mechanisms of remnant lipoprotein clearance. Experience in molecular biology, cell culture techniques, and transgenic mouse technology is preferred. Candidate must have Ph.D. and/or M.D. Please send curriculum vitae and list of references to: **Dr. MacRae F. Linton or Dr. Sergio Fazio, Vanderbilt University, 715 MRBII, Division of Endocrinology, Nashville, TN 37232-6303.** E-mail: macrae.linton@mcmail.vanderbilt.edu or sergio.fazio@mcmail.vanderbilt.edu; FAX: 615-322-4707. We are an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study cytokine regulation *in vitro*. The work will focus on using DNA vaccination in murine models of *Leishmania major* and *Mycobacterium tuberculosis*. Experience in cellular and molecular biology is required. In addition, experience with murine models of infectious disease is desired. Applicants should have an M.D. or Ph.D. degree, and preferably have three years of postdoctoral experience. Please send curriculum vitae and the names, addresses, and telephone numbers of three references to: **Dr. Robert A. Seder, Laboratory of Clinical Investigations, NIAID, NIH, Building 10, Room 11C215, 9000 Rockville Pike, Bethesda, MD 20892.** E-mail: rseder@nih.gov. Applications will be accepted through November 30, 1998. NIH is an Equal Opportunity Employer.

Sultan Qaboos University—Sultanate of Oman
COLLEGE OF AGRICULTURE
Agriculture Computing Scientist

Sultan Qaboos University, the National University of the Sultanate of Oman, invites applications for a faculty position of Agricultural Computing Scientist in the Department of Agricultural Economics and Rural Studies starting September 1998.

The incumbent will have the following duties: (1) teach assigned courses in the Department of Agricultural Economics including an introductory course on agricultural computing, (2) responsible for matters concerning computers in the College of Agriculture. Applicants should possess a minimum of Ph.D. degree in computer science, agricultural economics, economics, or related fields with proven theoretical and practical experience in computer applications and use. Strong knowledge of hardware-software systems is required.

The incumbent will act as a technical advisor to the College of Agriculture for all matters of computer hardware, software, and networks. As such, the incumbent will be a permanent member of the Computer Planning and Management Committee and will contribute to the future development of computer facilities in the College. Advanced knowledge of Microsoft Operating Systems (including network software) and Novell network system is necessary.

Evidence of sensitivity to cultural diversity and fluency in both spoken and written English are necessary. The ability to carry out assigned responsibilities for teaching, research, and extension, and to interact effectively with academic staff, technicians, and students is essential. Candidates should have at least two years of relevant experience.

Apart from a very attractive tax-free base salary, the University offers free furnished accommodation, two years renewable employment contract with end-of-service gratuity, annual leave with return air tickets, free medical treatment in Government Hospitals.

Interested candidates are requested to submit a letter of application and full C.V., quoting our Ref. ADV/AGR/06/98 to:

The Director, Personnel Affairs, Sultan Qaboos University, P.O. Box 50, Al-Khod-123, Sultanate of Oman
E-mail: personel@squ.edu.om

Please visit our website at <http://www.squ.edu.om/agr/index.html> for pertinent information.



ANTEX BIOLOGICS

Antex Biologics is a biopharmaceutical company dedicated to the discovery, development, and commercialization of products to prevent and treat infectious diseases and disorders related to infection.

MOLECULAR BIOLOGY **Senior Research Scientist**

As a member of a multidisciplinary project team, the selected individual will participate in research aimed at the discovery, evaluation, and development of new vaccines to treat or prevent bacterial infection and disease.

The successful candidate will have a Ph.D. in Biological Sciences, and a minimum of 5-8 years of postgraduate experience with demonstrated proficiency in a wide variety of molecular biology techniques including PCR, analysis of differential gene expression in bacteria, expertise with bacterial gene cloning and protein expression, vectorology, and strategies for generating gene knockouts. In addition, the candidate should have a demonstrated ability to troubleshoot molecular biology procedures, identify and evaluate new techniques, and adapt them to relevant research. The candidate should have developed organizational skills, computer search skills, and ability to work both independently and within a team and to supervise technical staff. **Code: SRS-MB**

Antex Biologics is located near Washington, D.C. in Gaithersburg, Maryland. The Company offers a competitive compensation and benefits package. For confidential consideration, please forward résumé and salary requirements indicating the position code number being applied for to: **Antex Biologics, Human Resources Department, 300 Professional Drive, Gaithersburg, MD 20879** or E-mail to info@antexbiologics.com.

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POSITIONS OPEN

POSTDOCTORAL POSITIONS GENETIC MODIFICATION OF STRIATED MUSCLE

Positions are available for highly motivated individuals to join a group of Investigators focused on genetic modification of striated muscle, with special emphasis on muscle diseases and the effects of aging. These positions are part of an NIH-funded Program Project at the University of Michigan Medical School. A brief summary of the participating faculty and each project is given below: **Jeffrey Chamberlain, Ph.D.** (human genetics): development of gutted adenoviral vectors for muscle gene therapy. The focus is on new vector development, with applications to muscular dystrophy. A junior faculty position is also available for a Director of an adenoviral core laboratory. **Susan Brooks, Ph.D.** and **John Faulkner, Ph.D.** (physiology/biomedical engineering): investigation of the relationship between the structure of the dystrophin complex and its function through direct studies of the mechanical properties of single muscle fibers in normal, dystrophic, and aging mice. **Joseph Metzger, Ph.D.** (physiology): genetic modification of heart contractile function *in vivo* using first-generation and gutted adenovirus-mediated gene transfer. **Jonathan Bromberg, M.D., Ph.D.** (microbiology and immunology): analysis of the immunology of adenoviral vector delivery to dystrophic and aging muscle. Send applications to: **Dr. Chamberlain at the Department of Human Genetics, University of Michigan Medical School, Ann Arbor, MI 48109-0618.** Include a cover letter with statement of research interests and career goals, an updated curriculum vitae, and the names of three references.

POSTDOCTORAL POSITIONS FUNCTIONAL GENOMICS AND CELL CYCLE REGULATION

Two Postdoctoral positions are available to develop yeast two-hybrid-based functional genomic approaches and apply them to the *Drosophila* genome (e.g., see: *Ann. Rev. Gen.* 31:663). The positions also offer the opportunity to continue a project to identify the protein networks that control cell proliferation in *Drosophila*, and to study the functions of individual members of these networks, including several novel cell cycle regulators (e.g., see: *PNAS* 93:3011). Scientists motivated to develop an independent research project in functional genomics or cell cycle research are encouraged to apply. Candidates should have a Ph.D. and experience in molecular biology. Some experience working with yeast or *Drosophila* is strongly preferred. Send curriculum vitae and three letters of recommendation to: **Dr. Russell L. Finley Jr., Center for Molecular Medicine and Genetics, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, MI 48201.** E-mail: rfinley@cmb.biosci.wayne.edu. For more information visit website: <http://cmmg.biosci.wayne.edu/rfinley/rfinley-home.html>.

TWO POSTDOCTORAL POSITIONS ST. JOHN'S UNIVERSITY

These positions are available immediately. The first project is concerned with the study of the structure and function of the mitochondrial outer membrane using techniques of biochemistry and molecular biology. The second project is focused on the transcriptional regulation of stress-response genes in *Escherichia coli*. Applicants for this position should have a strong background in molecular techniques and/or molecular genetics. Send a curriculum vitae and the names of three references for project one to: **Dipak Haldar, Ph.D.**, or project two to: **Irvin N. Hirshfield, Ph.D.**, Department of Biological Sciences, St. John's University, 8000 Utopia Parkway, Jamaica, NY 11439. E-mail: hirshfiu@stjohns.edu.

POSTDOCTORAL POSITIONS PLANT MOLECULAR BIOLOGY

Two Postdoctoral positions are available immediately to study the molecular biology of photosynthetic acclimation to elevated atmospheric CO₂. Research will examine the molecular control of photosynthetic gene expression at elevated CO₂ via carbohydrate signaling. Experience in molecular techniques is essential; biochemistry and plant biology experience helpful. Send curriculum vitae, statement of research experience/goals, and three reference letters to: **Dr. Jeff Seemann, Department of Biochemistry, University of Nevada, Reno, NV 89557-0014.** E-mail: seemann@scs.unr.edu. Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS

The University of Cincinnati College of Medicine offers a modern interdepartmental NIH training program in environmental molecular and cellular carcinogenesis and mutagenesis sponsored by the NIEHS. Cincinnati is a leading academic and industrial center providing numerous employment opportunities. Experimental approaches within the program include the role of growth factors and oncogenes in cellular transformation, the use of transgenic mice for studies of mutagenesis and carcinogenesis, and molecular toxicology. Participating faculty are: **Dr. Marshall Anderson** (genetics of lung cancer); **Dr. Nira Ben-Jonathan** (angiogenesis and endocrine disruptors); **Dr. Iain Cartwright** (genetics of responses to heavy metals in *Drosophila*); **Dr. Kathleen Dixon** (molecular mechanisms of mutagenesis); **Dr. Tom Doetschman** (growth factor gene ablation and carcinogenesis); **Dr. Sohaib Khan** (estrogen receptors-function and disruptors); **Dr. George Leikauf** (pulmonary toxicology); **Dr. Michael Lieberman** (growth factors, oncogenes, and differentiation); **Dr. Alvaro Puga** (molecular and genetic toxicology); **Dr. Daniel Nebert** (molecular biology of drug metabolism); **Dr. Steven Potter** (insertional mutagenesis in transgenic mice); **Dr. Peter Stambrook** (mutagenesis in transgenic cells and mice; oncogenes and cell cycle); **Dr. James Stringer** (recombination and gene targeting in ES cells and mice); and **Dr. David Warshawsky** (mechanisms of chemical carcinogenesis). Positions are immediately available. Applicants must have a U.S. citizenship or permanent residency and have completed a Ph.D. degree or equivalent. Candidates should send curriculum vitae and three letters of recommendation to: **Dr. Peter J. Stambrook, Chairman, Department of Cell Biology, Neurobiology and Anatomy, University of Cincinnati College of Medicine, Cincinnati, OH 45267-0521.** Telephone: 513-558-5685; e-mail: peter.stambrook@uc.edu. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS IN ANIMAL VIROLOGY

Fox Chase Cancer Center (website: <http://www.fccc.edu>) wishes to recruit Fellows for advanced training in molecular virology or viral pathogenesis. Our working group comprises **Dr. Sue Astrin** (EBV transformation), **Dr. Thomas London** (HBV epidemiology and interventions), **Dr. William Mason** (hepadnavirus persistence and replication), **Dr. Glenn Rall** (neurovirulence and pathogenesis of measles and LCMV), **Dr. Christoph Seeger** (hepadnavirus replication and pathogenesis), **Dr. Anna Marie Skalka** (retrovirus integration and splicing regulation), and **Dr. John Taylor** (hepatitis delta virus replication). The closing date for applications is December 1, 1998. Applicants should submit a résumé and description of research interests to: **Dr. John Taylor, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111-2497.** FAX: 215-728-3616; e-mail: jm_taylor@fccc.edu. Fox Chase is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION PROTEIN CHEMISTRY

One-year Oak Ridge Institute for Science and Education (ORISE) Fellowship. The project is to define residues in the binding site of bacterial toxins and enzymes that interact with sialic acid. Incumbent will create site-directed mutations in the putative bind site of toxins and determine their effects on sialic acid interactions. Requires Ph.D. in biochemistry or related field, one to three years of experience. Must be U.S. citizen or U.S. permanent resident. FDA laboratory located on NIH campus. Send curriculum vitae/résumé to: **FDA Recruitment (98026-WV), 1401 Rockville Pike, Suite 200N/HFM-123, Rockville, MD 20852.**

POSTDOCTORAL FELLOWSHIP

Position available for Protein Biochemist/Molecular Biologist in well-funded laboratory investigating the structure and mechanism of action of a novel enterotoxin elaborated by *Shigella flexneri* 2. Experience in microbiology, molecular biology, signal transduction, protein purification, receptor-ligand interactions, or protein phosphorylation desirable. Send curriculum vitae and names of three references to: **Dr. Alessio Fasano, University of Maryland, School of Medicine, Division of Pediatric Gastroenterology and Nutrition, 22 South Greene Street, Box 140, Baltimore, MD 21201-1595.** An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE POSITIONS THE DEPARTMENT OF ANATOMY AND CELL BIOLOGY The University of Iowa

Postdoctoral positions are available in the laboratory of **Dr. John F. Engelhardt, Ph.D.**, to develop redox mediated gene therapies for environmentally induced liver injury. Rodent models are used to better understand the mechanisms of free radical mediated tissue damage in two independent research areas: (1) sepsis and (2) liver transplantation. Of particular interest in these mechanisms are redox regulated pathways of signal transduction (such as AP-1 and NFkB) which determine the course of hepatocellular apoptosis and regeneration. These mechanisms will lay the foundation for the rational development of gene therapies aimed at decreasing liver damage and enhancing liver regeneration following injury (*Nature Medicine* 4:698-704, 1998). Successful applicants will have an M.D. and/or Ph.D., as well as experience utilizing molecular biology, cell biology, and/or recombinant viral vectors. A strong background in signal transduction is essential.

Send curriculum vitae, three letters of reference, and a statement of research experience to: **George McHenry, Department of Anatomy and Cell Biology, 1-100C Bowen Science Building, The University of Iowa, Iowa City, IA 52242.**

The University of Iowa, College of Medicine, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

POSTDOCTORAL FELLOW MOLECULAR BIOLOGY/IMMUNOLOGY

A Postdoctoral position is available in the Thomas E. Starzl Transplantation Institute in the Department of Surgery, University of Pittsburgh, to participate in externally funded studies on the regulation of dendritic cells in tolerance and immunity. Experience in PCR, Northern and Southern analysis, screening of genomic libraries, generation of deletion constructs to identify promoter elements, gel shift assays, and cell transfection required. Experience in cellular immunology preferred. Candidates should have excellent written and oral communication skills, and will be given a high degree of autonomy to design experiments within the scope of current grants. Send curriculum vitae and three letters of reference to: **C. Andrew Bonham, M.D., Assistant Professor of Surgery, 3601 Fifth Avenue, 4 Falk Clinic, Pittsburgh, PA 15213.** Telephone: 412-648-3200; FAX: 412-647-5480; e-mail: abu@med.pitt.edu.

USDA, ARS, Beneficial Insects Introduction Research Laboratory seeks a **POSTDOCTORAL RESEARCH ASSOCIATE** to study genetic differentiation and movement of parasitoids among host and host plant species. The position is for three years, beginning in October/November 1998. Ph.D., knowledge of population biology, and experience with molecular techniques required. Salary is \$39,417 plus benefits. Please send curriculum vitae and names, addresses (including e-mail), and telephone numbers of three references by 15 September 1998 to: **Dr. Keith R. Hopper, USDA, ARS, Beneficial Insects Introduction Research Laboratory, 501 South Chapel Street, Newark, DE 19713.** E-mail: khopper@udel.edu; Telephone: 302-731-7330, ext. 38; FAX: 302-737-6780. ARS is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available to study the mechanism of AKT2 oncoprotein (a serine/threonine kinase) in oncogenesis and genetic alterations in human ovarian cancer. This position requires background in molecular and cellular biology. Experience in gene cloning, signal transduction, cell cycle regulation, and protein-protein interaction preferred. Send curriculum vitae and names of three references to: **Dr. Jin Q. Cheng, College of Medicine, University of South Florida, 12901 Bruce B. Downs Boulevard, MDC, Box 11, Tampa, FL 33612.** FAX: 813-974-5536; Telephone: 813-974-8595; e-mail: jcheng@com1.med.usf.edu.

MOLECULAR INTERACTION TECHNOLOGIES 1998; October 19-20; Cathedral Hill Hotel, San Francisco. Organizers: **S. Fields, R. Balint, J. Larrick.** Sponsor: **Palo Alto Institute of Molecular Medicine, 2462 Wyandotte Street, Mountain View, CA 94043.** Telephone: 650-694-1420; FAX: 650-694-7717; e-mail: paimm@netgate.net; website: www.pano.com/paimm. See *Science* April 10, May 8, June 19, 1998, for speakers.

GLOBAL OPPORTUNITIES

CHIEF, DEPARTMENT OF RADIOBIOLOGY RADIATION EFFECTS RESEARCH FOUNDATION

Hiroshima and Nagasaki, Japan

The Radiation Effects Research Foundation (RERF) is carrying out an international search for a Chief of its Department of Radiobiology located in Hiroshima. RERF is a binational United States-Japan research foundation of approximately 290 employees whose basic mission is to study the effects of radiation from the A-bombs on the health of the survivors and their offspring. The foundation is funded jointly by the government of Japan through the Ministry of Health and Welfare (Koseisho), and by the government of the United States through the National Academy of Sciences with funds from the Department of Energy (DOE).

RERF has four other science departments: epidemiology, statistics, clinical studies, and genetics. The epidemiology program follows the mortality and cancer incidence in an original cohort of 120,000 people, and in 80,000 F₁; the statistics program provides support and analyses for all of the research departments; the clinical department routinely monitors the health of a subset of the original cohort, and studies causes of morbidity—it has the largest Japanese database on aging; the genetics program has a cytogenetics group studying chromosomal changes in the survivors, and a molecular genetics group studying mutations that might arise in 1,000 families for which immortalized cell lines have been established. The radiobiology program currently is carrying out molecular analyses of cancer tissues to determine if there are specific characteristics of radiation-induced cancers that distinguish them from other cancers. A second group in the department is involved in immunological studies to determine how radiation-induced changes might affect disease incidence. Resources available to these programs currently include samples collected and stored at local institutions as well as biological samples, such as blood cells RERF has collected and stored over many years.

The Chief of the Radiobiology Department, who interacts extensively with the Chiefs of the other departments, will be the head of a group of 29 people consisting of 11 Scientist Researchers, 14 Technicians, and four support staff. The successful candidate must possess an M.D. or Ph.D. degree and have a strong record in basic research (molecular biology, cell biology, genetics, radiobiology, or cancer biology, etc.).

The average salary level is approximately 14 million yen per year. Those who are not Japanese citizens might be eligible for relocation, housing, and cost-of-living supplementation.

For further information about RERF see the RERF website: <http://www.rerf.or.jp>.

Applicants should send a curriculum vitae, a list of publications, and the names, addresses, telephone numbers, FAX numbers, and e-mail addresses of three references to:

Chief of Research
Radiation Effects Research Foundation
5-2 Hijiyama Park, Minami-ku
Hiroshima 732-0815 Japan

Applications should be received before September 30, 1998.

COURSES & TRAINING

The California Institute of Technology (Caltech) and the University of Southern California School of Medicine (USC) has established a joint M.D.-Ph.D. degree program. Students do their preclinical and clinical work at USC and their Ph.D. work with a member of the Caltech faculty from the Biology, Chemistry, Engineering, and Applied Sciences Divisions. Admission to this joint program is made through the usual USC M.D.-Ph.D. process. Following the interview at USC, a subset of applicants are invited to interview at Caltech. The M.D. degree is awarded from USC and the Ph.D. from Caltech. Ph.D. studies involving collaborations between laboratories at both institutions could lead to a joint degree with both schools cited for the Ph.D. Stipends and full tuition waivers are available. Contact: Caltech/USC M.D.-Ph.D. Program, c/o S. Mosteller, University of Southern California School of Medicine, 1975 Zonal Avenue, Los Angeles, CA 90033. Telephone: 323-442-2413; FAX: 323-442-2722. E-mail: smostell@hsc.usc.edu; website: <http://www.usc.edu/hsc/medicine/MDPhD/mdphd.html>.

GLOBAL OPPORTUNITIES

INDIAN INSTITUTE OF SCIENCE BANGALORE—560 012.

Applications are invited from Indian nationals having a Ph.D. degree with about three years of postdoctoral experience, and preferably below the age of 35 years for faculty position at the level of ASSISTANT PROFESSOR in the Department of Biochemistry. The candidates are expected to develop and maintain independent research in any chosen area of biochemistry and participate in the teaching program. Interested persons should send (1) curriculum vitae, list of publications, selected reprints, and name and addresses of three referees and (2) a brief description of the proposed research program to: Prof. M. Vijayan, Chairman, Division of Biological Sciences, IISc, Bangalore 560 012 India. Please also visit the Department website: <http://www.biochem.iisc.ernet.in>.

COURSES & TRAINING

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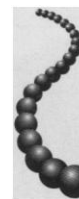
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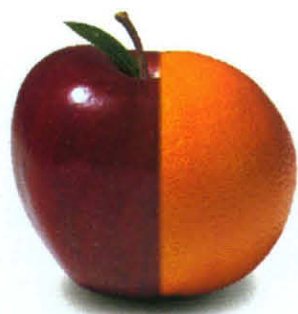
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