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Combine the power of Renaissance® Tyramide Signal Amplification (TSA) with the photostability and high fluorescent quantum yield of cyanine dyes for spectacular sensitivity in immunohistochemistry and in situ hybridization. TSA-Direct (Cyanine 3) and TSA-Direct (Cyanine 3 FISH) provide new choices for direct fluorescence detection, and facilitate fast, easy, high-resolution multi-color detection.

Fig. 1. Sensitive detection of integrated HPV in SiHa cells using TSA-Direct (Cyanine 3 FISH). Biotinylated HPV-16 E6 DNA probe (1000 bp) hybridized to cultured SiHa cells. TSA fluorescence detection used Streptavidin-HRP followed by Cyanine 3 Tyramide. Slide counterstained with Hoechst 33342 (Molecular Probes, Inc.) and evaluated using separate tetramethylrhodamine and DAPI filters. Photo taken on KODAK 1000 speed film with 5 second (Cyanine 3 Tyramide) and 0.5 second (Hoechst 33342) double exposure using a 100X objective.

Fig. 1

How Does TSA Work?

This technology uses HRP to catalyze the deposition of biotinyl or fluorescent tyramide onto tissue sections or cell preparation surfaces that were previously blocked with protein. This reaction is quick (less than 10 minutes) and results in the deposition of numerous biotin or fluorochrome labels. Deposition occurs right at the enzyme site, resulting in minimal loss of resolution.

These labels can then be detected directly or indirectly by standard techniques, with significant enhancement of the signal. This easy to use signal amplification technique may be applied to both IHC and ISH.

Use conventional filters

2a. Standard Fluorescence Detection

2b. TSA-Enhanced Fluorescence Detection

Tetramethylrhodamine filter

2c. Standard Fluorescence Detection.

2d. TSA-Enhanced Fluorescence Detection.

Multiband pass filter

Figs. 2a-d. Comparison of HPV fluorescence detection using Cy™3-conjugated Streptavidin versus TSA-Direct (Cyanine 3 FISH). Biotinylated HPV-16 E6 DNA probe hybridized to cultured CaSki cells.

2a-b. Standard fluorescence detection carried out with Cy™3-conjugated Streptavidin (Jackson ImmunoResearch Laboratories, Inc.). TSA-enhanced fluorescence used Streptavidin-HRP followed by Cyanine 3 Tyramide. Slides counterstained with Hoechst 33342 (Molecular Probes, Inc.) and evaluated using a tetramethylrhodamine filter. Photos taken using KODAK 1000 speed film with a 1 second exposure using a 40X objective.

2c-d. Protocol same as above but counterstained slides evaluated using a multiband pass filter. Photos taken using KODAK 1000 speed film with a 1 second exposure using a 40X objective.

Cy3 is a trademark of Amersham Life Science Inc.

Enhance signals up to 1000-fold with TSA

3a. Standard Fluorescence Detection

3b. TSA-Enhanced Fluorescence Detection

Fig. 3a-b. Comparison of standard fluorescence detection using Cy™3-conjugated Streptavidin versus TSA-Direct (Cyanine 3). Courtesy of Kevin Roth, M.D., Ph.D., Washington University School of Medicine, St. Louis, MO. Bouin's fixed, paraffin embedded mouse intestinal tissue, deparaffinized and incubated with biotinylated wheat germ agglutinin. Sections incubated with Cy3-conjugated Streptavidin (3a) or with Streptavidin-HRP followed by Cyanine 3 Tyramide (3b). Wheat Germ Agglutinin labels intestinal epithelial cells at the base of the crypts.

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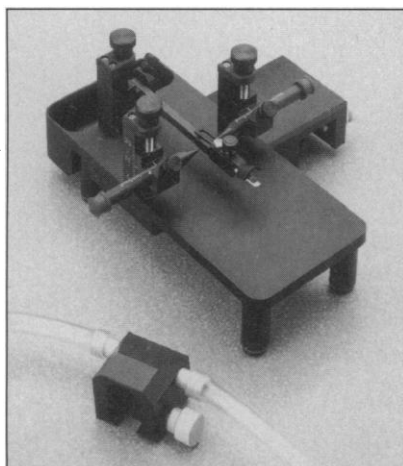
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(continued on page 1977)

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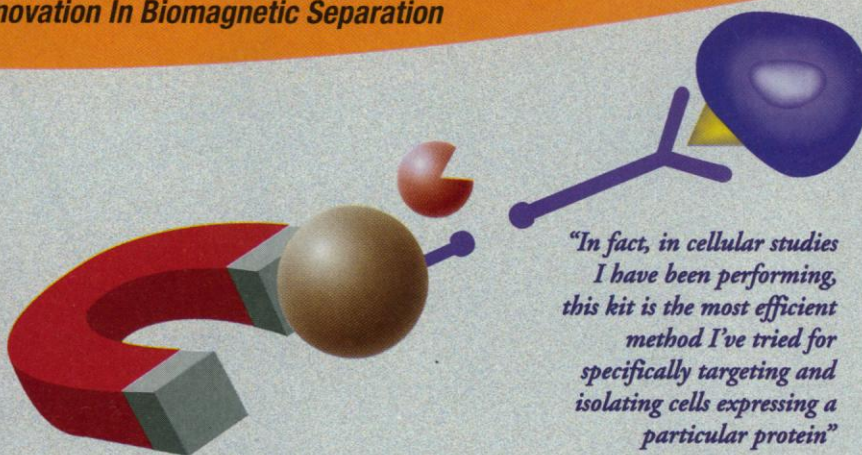
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Stratagene. For information call 800-424-5444 or circle 148 on the Reader Service Card.

Literature

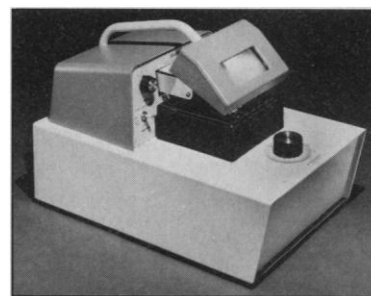
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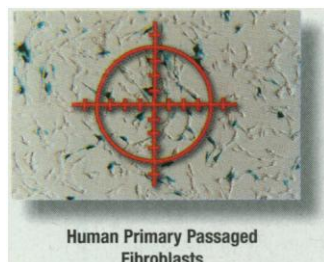
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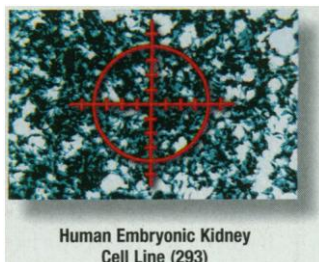
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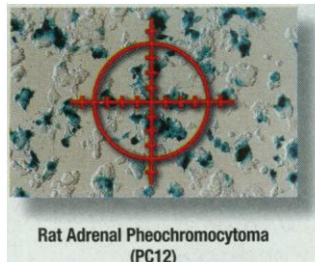
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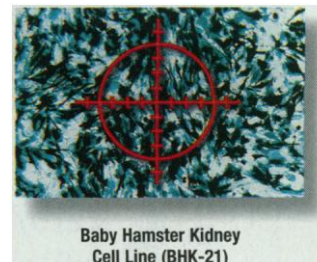
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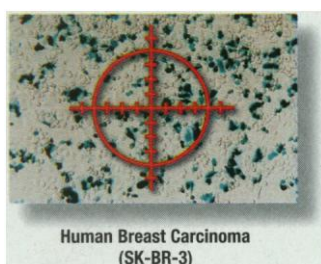
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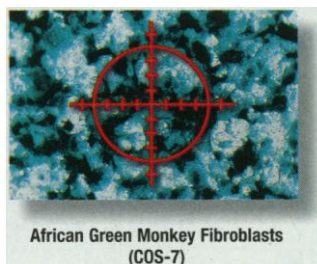
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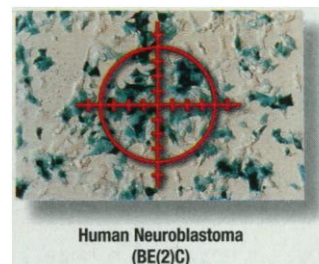
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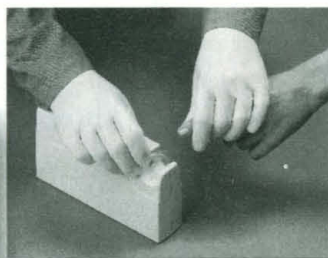
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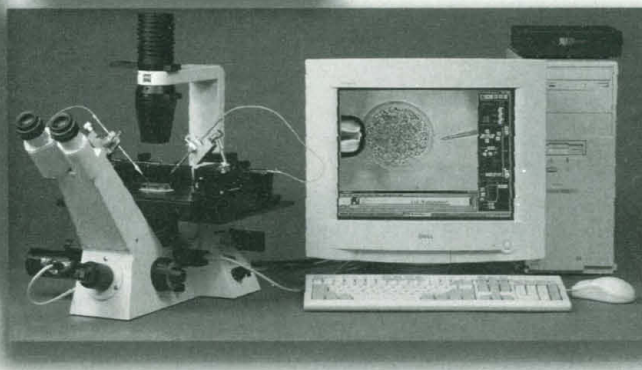
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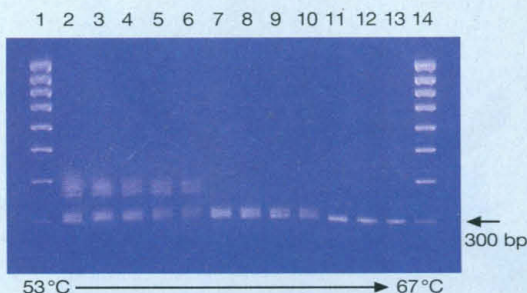
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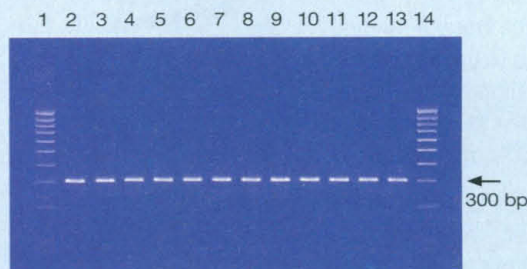
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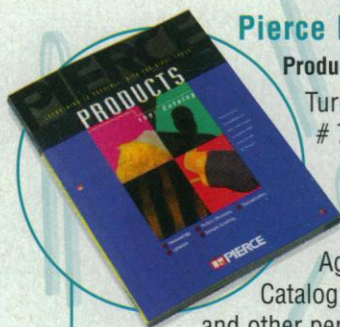
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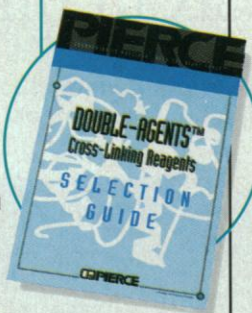
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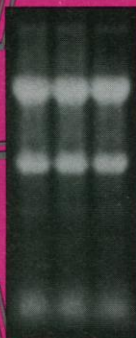
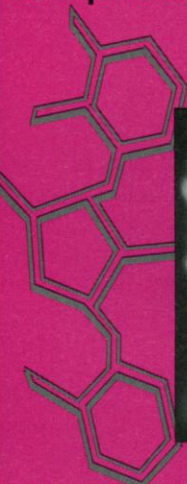
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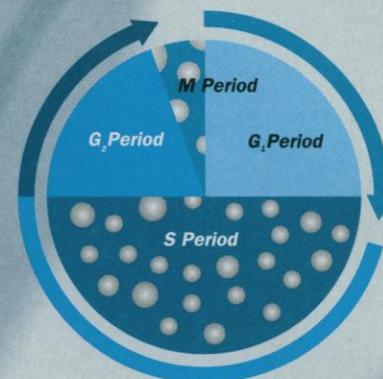
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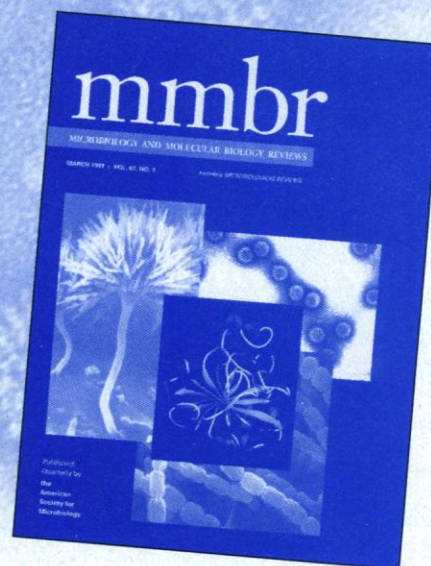
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The Department of Biology at Southwest Missouri State University (website: www.smsu.edu) invites applications for five tenure-track positions at the level of **ASSISTANT PROFESSOR**. Requirements for all positions include a Ph.D. with a specialty in the appropriate area and a record of publication. In addition to teaching (see below), duties include student advisement, research and publication, and involvement with the graduate (Master's) program. The positions are as follows:

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Plant ecology: Teaching duties include courses in introductory biology and plant ecology.

Biology education: Applicant must have either a Ph.D. in the biological sciences or a Ph.D. in science education with a Master's degree in biology. Teaching experience in middle or high school is required. Expertise in science education research is preferred. Teaching duties include introductory and upper-division biology courses for pre- and in-service teachers.

Starting date for all positions is 17 August 1998. Submit a letter of application specifying teaching and research interests, a curriculum vitae, and the names, addresses, telephone numbers, and e-mail addresses of five references to: **Dr. Alicia Mathis, Chair, Search Committee** (Specify position), Department of Biology, Southwest Missouri State University, Springfield, MO 65804-0095. Telephone: 417-836-5699; FAX: 417-836-4204; e-mail: sam477f@vma.smsu.edu. Review of applications will begin 16 January 1998. *Affirmative Action/Equal Opportunity Employer.*

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Applications are invited for a senior faculty position (**ASSOCIATE** or **FULL PROFESSOR**) in basic immunology. The candidate will hold an endowed chair in the Department of Pediatrics. Research in the immunology of Type I diabetes mellitus is of particular interest and within this field. Relevant areas of research interest include signal transduction in immunological function; protein trafficking related to receptor assembly and antigen presentation; the role of cytokines, cell adhesion molecules, and inflammatory reactions in immune responses; mechanisms of host-pathogen interactions; mechanisms and genetics of autoimmune responses; and development of immune systems. Excellent start-up funding and laboratory space is available and opportunities exist for collaborative research. Rank and salary commensurate with experience and based on University of California scale.

Applicants should have an M.D. or Ph.D. degree and a record of substantive research accomplishments. Skills and interest in teaching are essential. Submit curriculum vitae, bibliography, statement of research interests, and names and addresses of three references to:

Immunology Search Committee
c/o Gordon N. Gill, M.D.
University of California San Diego
9500 Gilman Drive, #119 CMM Building 0650
La Jolla, CA 92093-0650

Application deadline: April 1, 1998.
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Responsibilities and general information: Candidate's research must complement/expand existing departmental research in neuropharmacology; skeletal, cardiac, and smooth muscle molecular pharmacology; and vascular cell biology. Must be an excellent teacher and have experience in reviewing and upgrading curriculum.

Send letter of application, curriculum vitae, and a list of three references to: **Chair, Pharmacology Search Committee, Dean's Office/332, University of Nevada School of Medicine, Reno, NV 89557-0046**. Applications received by February 1, 1998, will be given full consideration. *Affirmative Action/Equal Opportunity Employer.*

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This appointment will likely be at the **JUNIOR LEVEL** although exceptional applicants may be considered for a **SENIOR** appointment. A Ph.D. in the field of science or engineering or the equivalent is required. Applicants should send a curriculum vitae including citizenship and/or visa status, a one- to two-page statement of research interests, copies of not more than three publications, and the names, addresses, and telephone numbers of at least three references. Industrial experience will be considered positively and applicant may submit records of accomplishments other than journal papers.

Applications should be sent to:

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The Institute of Human Virology of the Medical Biotechnology Center, University of Maryland Biotechnology Institute, invites applications for non-tenure-track positions at the level of **RESEARCH ASSISTANT PROFESSOR**. M.D., Ph.D., or equivalent doctoral degree plus a minimum of three years of relevant experience in clinical and/or basic research in chronic viral infections are required. Salary is commensurate with experience. Review of applications will begin on January 16, 1998, and continue until suitable candidates are selected. Send a letter of application, a statement of research interests, and an updated curriculum vitae with names and addresses of three references to: **Search Committee, Institute of Human Virology, 725 West Lombard Street, Baltimore, MD 21201**. *Affirmative Action/Equal Employment Opportunity Employer.*

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You will work closely with project teams to discover, design and optimize new drugs, and to provide new opportunities for streamlining the drug discovery process.

To qualify, you must have a Ph.D. in Chemistry, Biophysics or a related discipline; extensive research experience in applying molecular modeling techniques to problems in molecular structure or recognition; and proficiency in the computational methodologies and theories for drug design. Experience in the fields of protein structure and energetics, QSAR, NMR refinement, combinatorial chemistry library design and computer programming is highly desirable. As an integral member of our energetic discovery teams you should also possess excellent communication skills. We are planning to add three Application Scientists. **Department Code: SS1212JG**

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You will work closely with application modelers and medicinal chemists to develop new computational tools that will be applied to a variety of problems in drug discovery.

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Cheetip Benyajati - Regulation of gene expression during development of *Drosophila*; transcription, chromatin structure, and mechanisms of chromatin structure remodeling.

Thomas H. Eickbush - Molecular biology and evolution: integration of retrotransposable elements; origin and spread of mobile elements; regulation of rRNA genes.

Robert J. Fleming - Molecular and developmental genetics: roles of signal transduction in pattern formation and development of *Drosophila*.

David S. Goldfarb - Cell biology, genetics, and molecular genetics: the molecular mechanism of nucleocytoplasmic trafficking.

Martin A. Gorovsky - Molecular cell biology: chromatin function; mechanisms for generating microtubule diversity; function of post-translational modifications of histones and tubulins.

Barry G. Hall - Molecular evolution: molecular basis of adaptive evolution in bacteria; population biology of microorganisms; microbial genetics.

Stanley M. Hattman - Molecular biology and genetics: protein-nucleic acid interactions; DNA-methyltransferases; transcriptional- and translational-regulation of bacteriophage Mu.

David C. Hinkle - Molecular biology and biochemistry: mechanisms of DNA replication; repair and mutagenesis in eukaryotes; cloning yeast genes for replication and repair enzymes.

John P. Huelsenbeck - Evolutionary biology: phylogeny estimation and hypothesis testing; molecular evolution; host-parasite cospeciation; paleobiology.

John Jaenike - Ecology and evolution of host-parasite interactions; genetic structure of parasite populations; ecology and ecological genetics of mycophagous *Drosophila*.

Donald A. Kane - Developmental genetics: role of cell motility and the cell cycle in cell fate determination in the zebrafish.

Howard Ochman - Molecular and evolutionary genetics: molecular analysis of bacterial genomes; substitution rates in eukaryotes and prokaryotes; evolution of virulence.

Joanna B. Olmsted - Cell biology: biochemical, molecular, and developmental studies of cytoskeleton assembly and organization, particularly microtubule-associated proteins.

H. Allen Orr - Evolutionary genetics: genetics of speciation in *Drosophila*, genetic basis of adaptation, genetics of morphological differences between taxa, population genetics.

Terry Platt - Molecular mechanisms of gene expression; protein-nucleic acid interactions; transcription termination and mRNA 3' end formation in *Escherichia coli* and yeast.

Animesh Ray - Genetics and molecular biology: homologous recombination and gametogenesis in *Arabidopsis thaliana*.

Wolfgang Stephan - Evolutionary genetics; molecular population genetics; evolution of compensatory mutations; genome evolution.

John H. Werren - Evolutionary and ecological genetics; the evolution of "parasitic" or "selfish" DNA; cytoplasmic microorganisms in insects; genetics of speciation; biological control.

Susan Zusman - Developmental genetics, molecular biology, and cell biology: analysis of the *in vivo* functions of integrin receptors during *Drosophila* development.

Applications must be received by February 1. For additional information, contact the Biology Department's Home Page at <http://www.rochester.edu/College/BIO> or the Graduate Secretary, University of Rochester, Department of Biology, Hutchison Hall, Rochester, NY 14627 (e-mail: clyly@uhura.cc.rochester.edu).

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Identify and characterize novel antifungal therapeutic targets in our antifungal drug discovery program. Requires a Ph.D. with a strong background in molecular genetics of fungi. Experienced *Saccharomyces cerevisiae* molecular geneticists will also be considered. **Job Code: FGL10**

MS/BS Molecular Geneticists

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We are seeking MS- or BS-level scientists with 1-2 years of experience to work in the high-throughput screening group. Candidates must be able to learn new techniques quickly, pay close attention to details and work well with others. Duties will involve doing biochemical assays in a semi-automated high-throughput format. Specific capabilities that are highly desirable include: operation of semi-automated robotic equipment, use of 96-well assay and liquid handling equipment, experience in enzyme and cell-based drug screening assays. **Job Code: SCR1**

MS/BS Biochemists

Participate in highly collaborative interdisciplinary drug discovery programs involving novel high-throughput discovery assays, development of enzymatic and binding assays, protein expression and characterization, and elaboration of drug candidates. Applicants should have at least 2-5 years of laboratory experience in biochemical methods, including protein expression and purification, gel electrophoresis, and measurement of enzymatic and binding activities. Experience with drug discovery, ligand binding interactions, RNA biochemistry, high-throughput screens, cell culture, protein folding, protein/protein conjugation, fluorescence assays and immunoassays preferred. **Job Code: AFF11**

Ph.D. Biochemist/Molecular Biologist

Participate in highly collaborative interdisciplinary drug discovery programs. Position involves cloning, site-directed mutagenesis, protein expression and purification, and protein biochemistry for target identification. Applicants should have at least 2 years of postdoctoral experience involving molecular biological and biochemical methods development for protein targets. Experience with cloning, mutagenesis and expression in *E. coli*, COS cells, and insect cells, as well as experience in mammalian cell culture, protein folding, and immunoassays preferred. **Job Code: AFF12**

MS/BS Protein Biophysicist

Position involves biophysical characterization of macromolecular targets in highly collaborative interdisciplinary drug discovery programs. Applicants should have at least 3-5 years of laboratory experience in techniques including circular dichroism, fluorescent spectroscopy, calorimetry, and facility with protein biochemical methods including protein expression and purification, gel electrophoresis, and measurement of enzymatic and binding activities. Experience with protein folding and RNA biochemistry preferred. **Job Code: AFF15**

MS/BS Virologist

Position involves characterization of novel drug candidates in cell-based antiviral systems. Applicants should have at least 3-5 years of laboratory experience in mammalian virology, including tissue culture techniques (including transfection and infection of continuous cell lines and primary cell cultures), cell-based assays of viral replication (including immunodetection and nucleic acid hybridization techniques). Experience with animal models is helpful. **Job Code: AFF16**

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Ph.D., M.S. and B.S. level positions are available for individuals with 2+ years experience in the cloning and high level expression of proteins in *E. coli*, insect cells and yeast. Preference will be given to candidates with experience in engineering proteins for X-ray structure determination and to candidates with a strong background in insect cell expression systems. Working knowledge of PCR and mutagenesis methods is assumed.

Protein Purification/ Characterization

Ph.D., M.S. and B.S. level positions are available for individuals with 2+ years of experience in the isolation, purification and characterization of proteins produced in heterologous hosts. Preference will be given to candidates that have worked closely with X-ray structure groups and have a working knowledge of refolding proteins from *E. coli* inclusion bodies.

Cellular Biology

Ph.D. level position available for an individual with 4+ years industrial experience in the expression of therapeutic target proteins in mammalian cells and the development of cell-based assay systems. Preference will be given to those candidates with experience in screening small molecules for therapeutic value.

X-ray Crystallography

Ph.D. level position available for an individual with a demonstrated capability in protein crystallization, data collection, structure determination and refinement. Preference will be given to candidates experienced in structure-based drug design.

Biophysical Chemistry

Ph.D. level position exists for a highly motivated individual with demonstrated capabilities in biophysical chemistry. This individual will join a multidisciplinary team responsible for the development of novel high throughput assay technologies for drug discovery. The ideal candidate will have experience in many areas of biophysical chemistry, including ligand receptor binding interactions, protein folding, and spectroscopic characterization of proteins.

3-Dimensional Pharmaceuticals, Inc. is a drug discovery company engaged in the discovery of innovative pharmaceuticals by integrating advanced technologies in structure-based drug design, combinatorial chemistry, and cheminformatics. Located in Exton, PA, 3DP offers a comprehensive compensation and benefits package. Qualified individuals are invited to send their cover letter and resume with contact data for three references to:

3-Dimensional Pharmaceuticals, Inc.
Attn: Human Resources Dept.
665 Stockton Drive, Suite 104
Exton, PA 19341



**3-Dimensional
Pharmaceuticals, Inc.**

<http://www.3dp.com>

EOE

Assistant Professor Position

Assistant Professor to participate in epidemiological study of body composition and cardiovascular disease risk factors in the Division of Human Biology at Wright State University School of Medicine. One focus of the position is collaboration with existing faculty in the Division and a broadening of the research expertise of the team. This involves participation in the analysis of data collected in the ongoing Fels Longitudinal Study, collaboration in writing manuscripts, the development and expansion of the scope of research into new, related areas, and the acquisition of independent extramural funding. The desired starting date is July 1, 1998, or before. The position is dependent upon extramural grant funds.

Required:

Doctorate degree by starting date in human biology, sports medicine, exercise physiology, nutrition, epidemiology, biostatistics, genetic epidemiology, or a related field; two years of postdoctoral experience or equivalent (i.e., at least 6 first-authored, peer-reviewed publications); and ability to work independently and cooperatively within a team of established investigators.

Preferred:

Applicants with a strong research background/experience and with research interests that are compatible with, and complement, those of this team. Current research interests within this team include the role of changes in body composition over the life span in the development of cardiovascular and other age-related diseases, biostatistical methods for serial analyses, genetic epidemiology, and aging.

Review of applicants will begin January 2, 1998, and continue until position is filled. *Wright State University is an AA/EOE.*

To Apply: Send curriculum vitae, a short statement of research interests, and names of three references to: **Chair, Assistant Professor Search Committee, Div. Hum. Biol., Dept. of Comm. Health, Wright State University, SOM, 1005 Xenia Avenue, Yellow Springs, OH 45387-1695, FAX: (937) 767-6922, <http://www.med.wright.edu/som/academic/divhum/divhum.html>**

Faculty Positions

The Center for Comparative Medicine Schools of Medicine and Veterinary Medicine University of California, Davis

Qualified candidates are invited to apply for three professorial positions at the level of ASSISTANT PROFESSOR, ASSOCIATE PROFESSOR, or PROFESSOR, depending upon qualifications of the applicant. Applicants should have M.D., D.V.M., and / or Ph.D. degrees with postdoctoral experience, a record of publication in mainstream journals, and enthusiasm for the concepts of comparative medicine and investigation of diseases common to humans and animals. Faculty are sought whose research encompasses a variety of disciplines involving mechanisms of host-agent interactions during persistent infections, mechanisms of oncogenesis by infectious agents, and / or development of preventive or interventional strategies during persistent infections. Candidates will be expected to establish and maintain robust extramurally funded research programs and to participate in professional and graduate education in their fields of interest. Faculty members will hold academic appointments in their relevant departments within the Schools of Medicine and / or Veterinary Medicine. The Center for Comparative Medicine is a newly constructed and equipped research center that interdigitates with other campus-wide research programs in the School of Medicine, School of Veterinary Medicine, College of Agriculture, Division of Biological Sciences, California Regional Primate Research Center, Cancer Center, Center for Vector-borne Disease Research, and Center for Neurosciences. Review of applications will commence immediately and be accepted through February 27, 1998, or until positions are filled. Submit applications with letter of interest, curriculum vitae, concise statement of present and future research plans, summary of teaching experience / philosophy, up to three representative reprints, and four references (including addresses, telephone numbers, and e-mail addresses) to: **Stephen W. Barthold, D.V.M., Ph.D., Professor and Director, Recruitment Committee Chair, c/o Center for Comparative Medicine, University of California, Davis, CA 95616. *The University of California is an Equal Opportunity / Affirmative Action Employer.***

COURSES & TRAINING

RESEARCH FUNDING at the MARINE BIOLOGICAL LABORATORY 1998 Summer Research Fellowships

Special 1998 Competition in Evolutionary Developmental Biology (sponsored by the MBL and NASA)

For the 1998 Fellowship competition, special emphasis will be placed on proposals in the area of evolutionary developmental biology. Selected Fellows will be provided with clustered laboratory space, and may participate in a special seminar series at the MBL. Funding will be derived from private fellowship funds listed below, and from a cooperative agreement between the MBL and NASA's Life Sciences Division.

Research Fellowship Funding for All Areas

FULL FELLOWSHIP This fellowship covers costs of conducting summer research, plus living and travel expenses: **Nikon, Inc. Fellowship** - any area of biological sciences requiring the use of advanced microscopy

PARTIAL FELLOWSHIPS These fellowship funds may be available individually or in concert to cover many of the costs of conducting summer research, including living and travel expenses, in the following areas:

Robert Day Allen Fellowship - cell motility and cytoarchitecture

Frederik B. Bang Fellowship Fund - for research using marine models in molecular biology or biomedicine

Frank A. Brown, Jr. Memorial Readership - Covers fees for desk rental & full privileges in MBL/WHOI Library

Charles R. Crane Fellowship Fund - independent research in any area

John O. Crane Fellowship Fund - independent research in any area

Jean and Katsuma Dan Fellowship Fund - supports scientific visits to Japan by junior American investigators

Bernard Davis Fund - microbiology studies in the lab of N. Wainwright

Erik B. Fries Fellowship - covers laboratory or library expenses

M.G.F. Fortes Fellowship - neuroscience

Daniel S. Grosch Fellowship and Scholarship Fund - environmental toxicology

Ann E. Kammer Fellowship Fund - for women researchers, with a preference for neuroscience

Stephen W. Kuffler Fellowship - neurobiology

Lucy B. Lemann Fellowship - research in any area

Frank R. Lillie Fellowship - provides a research laboratory and funds for travel and supplies

MBL Associates Fellowships - research in any area

James A. and Falth Miller Memorial Fund - research in any area, with developmental biology preferred

NASA Life Sciences Program Fellowships - research related to the mission of the NASA Life Sciences Program

William Townsend Porter Fellowship for Minority Investigators - research in any area of physiology

Herbert W. Rand Fellowship - research in any area (Director's discretion)

The Evelyn and Melvin Spiegel Fellowship Fund - research in any area, developmental biology preferred

H. B. Steinbach Fellowship - cell biology and physiology

Application Deadline for fellowships and laboratory space rental is January 15, 1998

Applications are reviewed by the MBL Fellowship Committee. Notification of decisions will be mailed by March 15.

For application forms and additional information, please contact: **Fellowship Coordinator, Office of Research Administration, Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543-1015; Tel: (508) 289-7441; Fax: (508) 457-1924; E-mail: skaufman@mbi.edu; Internet/Web: <http://www.mbl.edu>.**



MARINE
BIOLOGICAL
LABORATORY

The MBL is an Equal Opportunity/Affirmative Action Institution

Head, Department of Physiology & Biophysics

The University of Calgary Faculty of Medicine invites applications and nominations for the position of Head of the Department of Physiology & Biophysics. This large, research intensive department comprises 31 full-time faculty with strengths in diverse areas of physiology and biophysics. For more information consult our website (www.ucalgary.ca/UofC/faculties/medicine/PHBI).

We are searching for an outstanding internationally recognized academic leader with a PhD, MD or equivalent degree, a strong academic background with demonstrated research achievements in physiology and/or biophysics, as well as demonstrated scientific leadership and administrative ability.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary is committed to Employment Equity.

Applications and nominations, including a curriculum vitae, a statement of research interests and academic goals, and the names of three referees, should be forwarded by January 31, 1998, to:

D. Grant Gall, M.D.
Dean, Faculty of Medicine
The University of Calgary
3330 Hospital Drive N.W.
Calgary, Alberta, Canada T2N 4N1



www.ucalgary.ca

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At Eli Lilly and Company, we've been driven by a commitment to excellence and the pursuit of innovation ever since we began researching and developing novel pharmaceuticals more than a century ago. We work hard to balance the needs of our employees by providing challenges that can make a difference along with a lifestyle that can inspire professional growth.

The quality of life in a community has a direct effect on the personal and professional satisfaction of those who live and work there. Because of our commitment to our employees' well-being, Eli Lilly and Company is proud to have its international headquarters located in Indianapolis, Indiana - a vital, multifaceted city that offers Indianapolis-based employees a home community which is both exciting and comfortable.


As cited in *Fortune Magazine*, Indianapolis is one of the top ten most improved cities in which to do business. To learn more about this growing city visit www.welcometoindy.com.

We are currently seeking BS/MS and PhD scientists to fill positions in these areas:

Molecular Biology
Cell Biology
Biochemistry

To be a part of our exciting global presence please send your resume to: Eli Lilly and Company, US Recruiting and Staffing, ADSCMS12, Indianapolis, IN 46285. We are an equal opportunity employer dedicated to diversity in the workplace.

For more information about Eli Lilly and Company please access our web site at www.lilly.com.


Eli Lilly and Company
KNOWLEDGE IS POWERFUL MEDICINE

DIRECTOR, FOGARTY INTERNATIONAL CENTER AND ASSOCIATE DIRECTOR FOR INTERNATIONAL RESEARCH, NIH

The John E. Fogarty International Center for Advanced Study in the Health Sciences (FIC), National Institutes of Health (NIH), located in Bethesda, MD, is recruiting for a person to serve as both the Director, Fogarty International Center and Associate Director for International Research, NIH.

The ideal candidate must possess at least a Bachelor's degree with major study in the biomedical or health sciences with a Ph.D. or an M.D. degree in a medical discipline appropriate to the NIH mission. In addition applicants must possess professional experience in the international medical research or international public health field at the senior level (GS-15 or equivalent) that meets the following mandatory knowledge, skills, and abilities as listed below.

1. Ability to provide visionary leadership in international medical research and research administration, as demonstrated through having achieved a leadership position and/or recognized stature in the medical/public research community;
2. Medical or scientific research expertise in illnesses that afflict the population of the world as demonstrated by a broad publication record in peer-reviewed journals; and,
3. Skill in representing the organization through interacting and negotiating with Federal, private sector and multinational leaders to develop international collaborative research opportunities.

This is a civil service position in the Senior Executive Service (SES) with an annual salary ranging from ES-1 to ES-6 (currently \$103,897 to \$123,100). A recruitment bonus of up to 25% of base pay may be paid to a non-Federal applicant or a relocation bonus of up to 25% of base pay may be paid to a Federal applicant selected for this position. Physicians may be eligible for a Physicians Comparability Allowance of up to \$20,000.

Applicants are required to submit a bibliography and curriculum vitae, resume or any other written format which addresses the requirements indicated in this announcement. *All applications are to be postmarked no later than close of business December 19, 1997.*

Ms. Karen Webb, National Institutes of Health, NHLBI Personnel Office, Building 31, Room 5A28, 31 Center Drive, MSC 2484, Bethesda, MD 20892-2484.

National Institutes of Health is an Equal Opportunity Employer



**St. Jude Children's
Research Hospital**

ALBAC - Danny Thomas, Founder

DIRECTOR OF BLOOD BANKING/ TRANSFUSION MEDICINE

The Department of Pathology and laboratory Medicine invites applications for the position of Director of the Blood Bank/Transfusion Medicine at the Assistant or Associate Member rank. The candidate must hold an M.D. or M.D., Ph.D. Degree(s), be board certified or eligible in Clinical Pathology and have a strong commitment to active support of the clinical services and have an independently funded research program or have the potential to establish such a program. Candidates with research interests in the molecular mechanisms of hematopoietic stem cell development, stem cell isolation and *in vitro* expansion, gene therapy, or graft versus host disease are particularly encouraged to apply.

The transfusion medicine service within the Department of Pathology includes the blood bank, HLA laboratory, and pheresis and donor services. These combined laboratories perform over 10,000 transfusions and 2,600 blood product collections per year and provide support for one of the largest pediatric bone marrow transplantation program in the country and an active program in Cell and Gene Therapy. Strong interdepartmental research programs are present in molecular oncogenesis, viral oncogenesis and tumor immunology, hematopoietic malignancies, pediatric solid tumors, signal transduction and developmental neurobiology. Research and clinical activities are carried out in adjoining state-of-the-art buildings that provide an environment that fosters close collaborations between basic and clinical investigators.

Applicants should send a curriculum vitae, description of research interests, and three letters of recommendation to: **James R. Downing, M.D., Chairman, Department of Pathology and Laboratory Medicine, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, TN 38105.**

COMPREHENSIVE CANCER CENTER OF WAKE FOREST UNIVERSITY

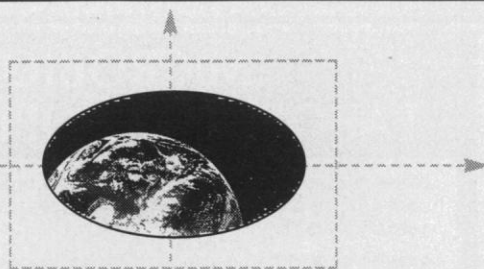
Applications are invited for new faculty positions (M.D. and Ph.D.) at the Assistant, Associate, or Full Professor level in the following departments:

- **PATHOLOGY**
Tumor Cell Biology and Molecular Diagnostics
- **CANCER BIOLOGY**
Tumor Immunology, Gene Therapy, DNA Damage
- **HEMATOLOGY/ONCOLOGY**
M.D. Oncology Investigators in Leukemia, Breast Cancer, Genitourinary Cancer, Lung/GI Cancer, Cancer Genetics & Epidemiology, Ph.D.. Psychosocial Oncologist
- **RADIATION ONCOLOGY**
Section Head of Radiation Biology
- **PUBLIC HEALTH SCIENCES**
Genetic Epidemiology, Cancer Epidemiology

The Comprehensive Cancer Center of Wake Forest University is an NCI-designated Comprehensive Cancer Center. Submit CV and funding history to:

**Frank M. Torti, M.D., Director
Comprehensive Cancer Center of
Wake Forest University
Medical Center Blvd.
Winston-Salem, NC 27157-1082**

AA/EEO



**We're redefining the way the world
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sciences company at Monsanto.**

And we're even more focused on the future. That's why our entire organization, from agricultural biotechnology to pharmaceuticals to food ingredients, is dedicated to life sciences. Now, we can answer the questions, needs and demands of our ever-changing planet. After all, the world's resources are finite, but our vision for the future is limitless. The Agracetus Campus of Monsanto Company, has the following position available on the Global Rice Team for an experienced rice breeder or agronomist:

Applied Genetics/Rice

The successful candidate will work closely with the Transformation and Molecular Biology groups in the development of novel rice varieties. The individual will have primary responsibility for planning and conducting field evaluations and making selections of elite transgenic rice lines.

Candidates should have at least an M.S. or Ph.D. and 3-5 years experience in rice breeding, including the use of genetic manipulation and molecular breeding tools in the characterization or development of superior rice varieties. Expertise in database management, excellent communication skills, and the ability to work in a team environment are critical. A familiarity with plant molecular biology and rice transformation would also be highly desirable. Experience in or collaboration with any of the U.S. rice breeding programs is preferred. There will be considerable interaction with and travel to various research locations. A working knowledge of Japanese would be an asset.

Agracetus, located in Middleton, Wisconsin has an expanded and modern research location with state-of-the-art plant transformation and greenhouse facilities. As part of a growing global company, we offer a competitive salary and benefits package. For consideration, please send your resume and three references to: **Agracetus Campus, c/o Monsanto Company, Attn.: A. Kersten, 8520 University Green, Middleton, WI 53562. Fax: (608) 836-9710. E-mail: andrea.j.kersten@monsanto.com.** EEO/AA Employer M/F/D/V.

Monsanto

MICROBIOLOGY LABORATORY OPPORTUNITIES

Battelle, a world leader in research and technology development, has several opportunities at the Dugway Proving Ground in **Dugway, Utah**. Individuals selected must be U.S. citizens and eligible for a security clearance.

SENIOR SCIENTIST – Position requires a Ph.D. in Microbiology or other related field and a minimum of 1 year of postdoctoral experience. Candidate should have demonstrated team research/development leadership. This position involves training and directing project staff, writing proposals and project reports and maintaining customer relations. Experience in molecular genetics, molecular biology, phage display technology and/or working with biological aerosols would be beneficial.

ASSOCIATE SCIENTIST – Position requires an M.S. in Microbiology, Physical or Life Sciences, or other related field. Some science-related graduate studies would be beneficial. Computer skills to develop testing presentations and excellent interpersonal skills are expected. The position involves coordinating field and laboratory test activities, writing information packages and test plans and reports, performing post-test data reduction, maintaining quality control for test data, coordinating test related issues with customers and logistical support for field testing.

TECHNICIAN – Position requires a B.S. in molecular biology or equivalent related field work and a minimum of three years of laboratory test and analysis experience. Experience in safe handling of highly toxic solids, liquids and gases; ability to work independently; working knowledge of Microsoft Word, Excel, and/or WordPerfect; and a strong team-orientation are expected. Involves calibrating and operating laboratory instruments, preparing test instrumentation and systems, documenting procedures and results, assisting in the development and verification of test instrumentation and methods and performing PCR.

Battelle offers competitive salaries, a comprehensive benefits package and opportunities for professional development. Qualified candidates may send a resume with salary history to: **Battelle, Dugway Operations, Job#N282, P.O. Box 217, Dugway, UT 84022. Attn: Robert Mattinson.** Battelle is an Affirmative Action/Equal Opportunity Employer M/F/D/V.



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At Carolinus HealthCare System, we continue to anticipate changes in the dynamic healthcare industry and respond with services that meet the needs of the population we serve with excellence. Our expansive healthcare system is comprised of facilities that are distinguished by their sophisticated technology, progressive environments and dedicated people.



**CANNON RESEARCH
CENTER**

The Department of General Surgery in the Cannon Research Center has an immediate opening for a postdoctoral fellow in cell biology as it relates to tissue engineering. The focus of the project is to study the creation of autologous cellular constructs for the development of a soft tissue for breast reconstruction. Experience in cell/molecular biology required with a background in cell adhesion/integrin expression and developmental biology a plus.

We offer a competitive salary and benefits package. Applicants should send a complete curriculum vitae to **Human Resources, Carolinus HealthCare System, P.O. Box 32861, Charlotte, NC 28232-2861.** EOE/AA



**Agricultural
Research
Service**

FIELD ENTOMOLOGIST

The U.S. Department of Agriculture, Agricultural Research Service, Pest Management and Agricultural Systems Research Laboratory located in Sidney, Montana is seeking a Research Entomologist, GS 12/13 (\$44,953 to 69,492 per annum, salary commensurate with experience) to conduct research on the biology and control of grasshoppers in agroecosystems. The scientist will serve as a member of a team conducting research on grasshopper ecology plus biological, chemical, and cultural tactics for their suppression on rangeland and food/forage crops on the northern Great Plains. Research objectives include: the characterization of the damage potential of grasshoppers under standard and novel tillage systems, the development of monitoring techniques that detect grasshopper movements between non-crop and crop areas, and the development of efficient tactics that can suppress local sources of chronic infestations. A Ph.D. in entomology is highly desirable, however, all applicants for this position must have a degree with at least 16 semester hours in entomology and 1 year of specialized experience that has provided the knowledge, skills, and abilities to develop, conduct, and document a scientific research project concerning insect management. This is a competitive, permanent appointment and U.S. citizenship is required. ARS is an Equal Opportunity Employer. For information concerning the position, contact **Neal Spencer, Research Leader, Northern Plains Agricultural Research Laboratory** at (406) 482-2020. For application procedures/forms please contact **Charlotte Anderson** (406) 482-9432, Fax: (406) 482-9450, or E-mail: canderso@sidney.ars.usda.gov or write to **USDA/ARS/HRD/WOB, 6305 Ivy Lane, Suite 200, Greenbelt, MD 20770-1435.** Application must be postmarked by December 31, 1997.

THE NATIONAL RESEARCH COUNCIL

announces opportunities for

Postdoctoral & Senior Research Associateship Awards

available at the

U.S. ARMY MEDICAL RESEARCH INSTITUTE OF INFECTIOUS DISEASES

Awards sponsored by the National Research Council are available for research to be conducted at the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, Frederick, MD. Applications are invited from individuals interested in the investigation of the role of cell-mediated responses in immune protection against a variety of pathogens, to include *Yersinia pestis*, *Bacillus anthracis* and *filoviruses*. Research projects will focus on the role of various cellular components and of proinflammatory cytokines in immune protection, and the identification of *in vitro* correlates of protection.

Stipends begin at \$35,045 per annum and are appropriately higher for applicants with greater than 5 years' experience. Requirements: Ph.D. or equivalent. U.S. citizenship preferred; background in cellular or molecular immunology, and some experience with cytokine biology would be advantageous. Awards are for 1 year with possible renewal for up to 3 years maximum.

For further information contact:

Tran C. Chanh, Ph.D.

Virology Division, MCMR-UIV-R, USAMRIID
1425 Porter Street, Ft. Detrick
Frederick, MD 21702-5011

Phone: 301-619-4795 • Fax: 301-619-2290

Email: tran_chanh@detrick.army.mil

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

For application materials contact:

**NATIONAL RESEARCH COUNCIL
ASSOCIATESHIP PROGRAMS (TJ2114/RD)**

2101 Constitution Avenue, NW

Washington, DC 20418

FAX: (202) 334-2759

EMAIL: rap@nas.edu

Internet: <http://www.nas.edu/rap/welcome.html>

NATIONAL INSTITUTES OF HEALTH

Undergraduate Scholarship Program (UGSP)

Qualified undergraduates can train and be mentored at the cutting edge of biomedical research while receiving scholarship support.

The UGSP is sponsored by the National Institutes of Health (NIH), the Federal Government's lead biomedical research and research training agency. NIH offers scholarships to qualified individuals who are committed to a career in biomedical research.

Scholarships up to \$20,000 per year support tuition, educational, and qualified living expenses (room, board, transportation) while students pursue an undergraduate degree.

During each year of the award, scholars serve for 10 weeks (with salary/benefits) as employees in NIH research laboratories. They are assigned mentors, participate in seminars and programs available to all NIH researchers, and are provided with housing and transportation. After graduation, they serve 1 year of full-time employment at NIH for each year of scholarship support.

Interested students should apply if they:

- Are committed to a career in biomedical research;
- Are from a disadvantaged background;
- Have a GPA of 3.5 or are in the top 5 percent of their class;
- Are a U.S. citizen, national, or permanent resident;
- Are enrolled or accepted for enrollment as a full-time student at a qualified accredited institution.

This is a special opportunity for special students.

For more information, contact

NIH/OD/OIR/OLRS
UGSP

7550 Wisconsin Avenue, Room 604
Bethesda, MD 20892-9121

Phone: 800-528-7689
Fax: 301-402-8098
e-mail: ugsp@nih.gov
TTY: 1-888-352-3001
<http://ugsp.info.nih.gov>



University of Toronto Dean Faculty of Pharmacy



The University of Toronto invites nominations and applications for the position of Dean of the Faculty of Pharmacy. The Faculty, the only school of Pharmacy in Canada's largest province, offers programs leading to Bachelor of Science in Pharmacy and Doctor of Pharmacy degrees, as well as Master's and doctoral programs. The Faculty is committed to being a centre of research, creative practice, teaching and critical discourse in pharmaceutical sciences, and care in ways that are of local, national, and international significance. Consistent with this mission, the successful candidate should possess distinguished credentials as an educator and researcher, demonstrated leadership abilities, and a strong interest in academic administration in order to foster excellence in education, research, and service programs. Vision, initiative, and the drive to develop an international outlook and reputation for the Faculty will distinguish the successful candidate. In addition, candidates should have proven skills in communication, consensus-building with faculty, staff, students, and alumni, members of the University's academic health science complex, and professional, community, and government organizations, and developing partnerships within the University and within the health care system and industry.

The appointment will be at an appropriate academic rank and at a salary level commensurate with experience. The preferred starting date is July 1, 1998. The Search Committee will begin to review applications in late November and will continue to do so until the position is filled.

The University of Toronto is an Employment Equity Employer. Non-Canadians will be considered, although, in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Applicants should send, in strict confidence, a curriculum vitae and the names and addresses of 3 referees to: **Professor Adel Sedra, Vice-President and Provost, University of Toronto, 27 King's College Rd., Rm. 225, Toronto, M5S 1A1.**



VICE CHANCELLOR FOR RESEARCH AND GRADUATE STUDIES Louisiana State University

LOUISIANA STATE UNIVERSITY invites applications and nominations for the position of Vice-Chancellor for Research and Graduate Studies. The Vice-Chancellor is the chief research officer of the University, responsible for the administration, service, and promotion of research and graduate studies and for technology transfer and economic development. The Vice-Chancellor reports to the Executive Vice-Chancellor and Provost.

LSU is a Research I University, and a land- and sea-grant institution. Located in the state's capital, Baton Rouge, LSU provides undergraduate, graduate, and professional programs of instruction, research, and service to 28,000 students. Doctoral degrees are offered through the graduate school in 54 major fields.

The University seeks an individual with significant administrative experience, demonstrated leadership abilities, an established record of research accomplishments, and proven success in securing extramural funding. A strong commitment to interdisciplinary studies, and to fostering excellence in research and graduate education is essential, as is practical experience in technology transfer/economic development. It is expected that the successful candidate will be appointed as a tenured Professor to an appropriate academic department. Applicants must have an earned doctorate.

Candidate screening will begin on January 5, 1998, and will continue until the position is filled. Applications/nominations should be sent to:

Dr. Thomas R. Klei

**Chair, Search Committee for Vice-Chancellor for Research and Graduate Studies
Heidrick & Struggles**

**Consultants in Executive Search
1301 K Street, N.W.**

Suite 500 East

Washington, D.C. 20005

LSU IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

The Scripps Research Institute

Ph.D. Programs

Chemistry Macromolecular & Cellular Structure & Chemistry

The Scripps Research Institute will admit highly qualified students in the fall of 1998 to two Ph.D. programs: one integrating cell and molecular biology with structure and chemistry, and the other in chemistry.

Graduate studies at Scripps provide an exceptional training opportunity in a uniquely multidisciplinary environment with an emphasis on individualized training for each student.

Candidates must have a bachelor's degree and a strong background in biology and/or chemistry. Qualified applicants will be invited to visit the Institute. Financial support will be provided to all accepted students.

Since its establishment in 1961, the Institute has gained international recognition for its basic research in molecular biology, immunology, chemistry, neurosciences, cell biology, and plant biology.

Individuals interested in applying to either program should contact the Office of Graduate Studies for a brochure and application due by February 1, 1998: **The Scripps Research Institute, Office of Graduate Studies, 10550 North Torrey Pines Road, La Jolla, CA 92037. Tel: (619) 784-8469. Fax: (619) 784-2802. Internet: <http://www.scripps.edu>.** The graduate programs are accredited by the Western Association of Schools and Colleges. TSRI is an equal opportunity institution.



ASSISTANT/ASSOCIATE PROFESSOR Plant Molecular Biology/Biotechnology Laboratory The University of British Columbia

The Biotechnology Laboratory invites applications for a tenure-track faculty position at the level of Assistant or Associate Professor in the area of plant and forest biology.

The Biotechnology Laboratory is an interdisciplinary facility established ten years ago at the University of British Columbia by Nobel Laureate Michael Smith. Its mandate is to foster the development of biotechnology through an interactive approach to problems in human, animal, plant and forest biology and in fermentation and process engineering using modern techniques of genetics and molecular and cellular biology. There are currently ten faculty members conducting research in the Biotechnology Laboratory with 52 graduate students drawn from ten different academic departments.

The successful candidate will be expected to establish a vigorous research program in plant molecular genetics, with emphasis on forestry. Potential research areas include, but are not restricted to genomics, developmental genetics, somatic cell genetics, disease/insect resistance and genetic engineering. Investigators with experience in model plant systems and an interest in forestry are encouraged to apply. He/she will have cross appointments in forestry and/or plant science and will be expected to participate in the education of students at the undergraduate and/or graduate level.

There are many opportunities for collaboration with other members of the Biotechnology Laboratory or other units on campus. Several Networks of Centres of Excellence are represented at the University and a new Genomic Sequencing Centre has just been established in Vancouver. The successful applicant will assume a laboratory completely equipped for molecular genetics and cell biology, will have access to state-of-the-art facilities for a wide range of studies in biotechnology and will play an integral role in maintaining and expanding the University's strength in plant and forest molecular genetics.

Screening of applicants will begin **February 1, 1998**, and continue until the appointment is filled. Candidates should provide a bibliography, a current curriculum vitae, a description of proposed research and interests, and the names and addresses of three referees to **Dr. Douglas G. Kilburn, Director** at:



**The Biotechnology Laboratory
University of British Columbia
6174 University Blvd., Rm. 237,
Vancouver, B.C. Canada V6T 1Z3
Fax: (604) 822-2114**

UBC hires on the basis of merit and is committed to employment equity. We encourage all qualified persons to apply. In accordance with Canadian immigration policy, priority will be given to Canadian citizens and permanent residents.

CABRINI COLLEGE

Cabrini College, founded in 1957 by the Missionary Sisters of the Sacred Heart of Jesus, is a Catholic, coeducational, residential institution offering bachelor's and master's degrees to approximately 2,100 students. Nestled on a 110 acre campus in the heart of the Philadelphia Main Line Suburb of Radnor, the College offers the tranquility of an intimate and attractive residential campus and the excitement of a dynamic city.

BIOLOGY – ASSISTANT PROFESSOR (one position)

Available Fall 1998. We are seeking applications from persons whose major teaching interests are in microbiology, physiology and general biology. An ability to teach one or more of the following areas is desirable: environmental science, nutrition, animal behavior, and/or immunology. Ph.D. and college teaching experience required. Competence in computer-aided instruction desired. Interest in or ability to direct Allied Health Programs also desired.

CHEMISTRY – ASSISTANT PROFESSOR (two positions)

Available Fall 1998.

1. Major teaching interests and background in organic chemistry at the introductory and advance levels required.
2. Major teaching interests in inorganic at the general and advanced levels as well as analytical chemistry required.

An ability to teach one or more of the following areas is desirable: biochemistry, environmental chemistry, instrumental analysis, advanced lab techniques, non-major courses. Microscale-lab experience is also desired. Ph.D. and college teaching experience required. Competence in computer-aided instruction desired.

Submit cover letter, vita, and names and numbers (only) of three references to: **Susan F. Kazmierczak, Director of Human Resources, 610 King of Prussia Road, Radnor, PA 19087-3698.** Specify in your cover letter for which position(s) you are applying and send separate credentials for each position if applicable. Review of credentials will begin immediately and will continue until the positions are filled. Competitive salary and benefits package. We are an equal opportunity/affirmative action employer.

FACULTY POSITION IN BIOCHEMISTRY

The Department of biological Sciences of The University of Calgary invites applications for a tenure-track faculty position as Assistant Professor (salary range \$40,238-\$57,266 per annum.) The position is available July 1, 1998, and is open to applicants with a strong background (Ph.D. degree, at least two years of postdoctoral experience, and a record of productive, high-quality research) in any competitive area of biochemistry.

The successful candidate will be a member of the Division of Biochemistry (see <http://www.ucalgary.ca/UofC/faculties/SCBI/biochem> for more information) and will establish an active, conceptually-motivated and externally-funded research program and contribute to both undergraduate and graduate teaching in biochemistry. Individuals with a commitment to excellent in teaching and interests or experience in teaching advanced metabolism or pharmaceutical and industrial biotechnology are encouraged to apply.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary is committed to Employment Equity.

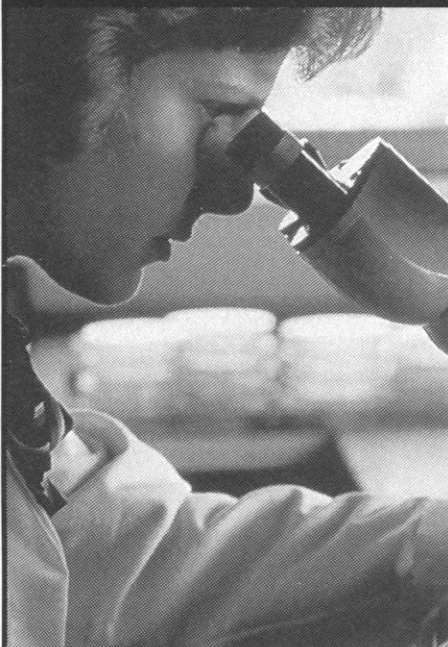
A complete application should consist of a curriculum vitae including an e-mail address, a concise outline of research plans, copies of maximally three representative publications, and a statement of teaching interests and philosophy. Candidates should arrange to have three letters of reference sent to the address below. The closing date for receipt of the complete application package and the reference letters is **February 27, 1998**. Please send your application package to:

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



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For more details, contact:

Vincent J. Cairolì, Cancer Training Branch, National Cancer Institute
301-496-8580 ■ 301-402-4472 (Fax) ■ VC14Z@nih.gov

**Fetzer Institute Fellowship in
Theoretical Bioelectromagnetics**

The Fetzer Institute announces the availability of a two-year Postdoctoral Research Fellowship in theoretical bioelectromagnetics. The purpose of the fellowship is to strengthen the theoretical understanding of the interactions between weak electromagnetic fields and biological systems. Particular emphasis will be placed on the application of principles of nonlinear dynamics to the proposed research.

ELIGIBILITY: Candidates must hold a Ph.D. or equivalent degree in an appropriate discipline. To foster collaboration between theoreticians and experimental scientists, candidates must also have made arrangements to work in the laboratory of a senior scientist who conducts experimental research.

APPLICATION: Candidates must submit a three-page letter of application stating their research interest and presenting an outline of a research plan. A C.V. including authored publications must accompany the letter. Candidates must have a senior member of the chosen laboratory submit a letter to the Fetzer Institute that includes a description of the resources available to the candidate. In addition, two supporting letters must be submitted to the Fetzer Institute by senior scientists familiar with the candidate's work. Send all materials to: **Bioelectromagnetics Fellowship, The Fetzer Institute, 9292 West KL Avenue, Kalamazoo, MI 49009-9398.**

DEADLINE: Applications must be received at the Fetzer Institute by May 1, 1998. Applications arriving after this date will not be accepted. The Institute will notify the successful candidate by June 30, 1998.

TERMS: The tenure of the fellowship begins in the fall of 1998 and lasts for two years. The fellowship provides a salary commensurate with the candidate's experience and an allowance for research expenses and travel. The Fetzer Institute does not provide indirect costs to the host institution.

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FACULTY POSITION

COMMUNITY/ECOSYSTEM ECOLOGY

The Department of Biological Sciences at the University of Pittsburgh anticipates making one full-time tenure-track faculty appointment in the area of community ecology beginning July 1999, to continue expansion of the Department. Applications are invited from candidates with research interest at the community/ecosystem interface. Work centering on resource flux and its translation through communities, or its influence on community structure is especially valued. This appointment is expected to be made at the starting Assistant Professor level, but under exceptional circumstances experienced candidates with outstanding records will be considered at higher rank. Our expanding ecology and evolution program has excellent research and teaching facilities on campus and at the University's Pymatuning Laboratory of Ecology (<http://www.pitt.edu/~blueeye/ee2.html>). The successful candidate must have a Ph.D. and extensive postdoctoral experience and will be expected to establish an extramurally funded research program, train graduate students, and participate in undergraduate education. In order to ensure full consideration, applications must be received by January 16, 1998. Applicants should send a curriculum vitae along with a summary of research interests and goals, and arrange to have at least three letters of reference sent to:

Dr. Stephen Tonsor
Ecology Search Committee
Department of Biological Sciences
University of Pittsburgh
Pittsburgh, PA 15260
(412) 624-5491

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Associate/Staff Scientist

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The qualified candidate must be able to design, implement and interpret results from relevant experiments which contribute to overall project goals. Should also possess excellent writing and communication skills, and be willing to work with interdisciplinary teams on discovery projects related to inflammatory/immunological diseases. The successful individual will have an MS or BS with equivalent experience in molecular immunology and/or signal transduction. Research experience in a range of molecular and cellular biology techniques including cell culture, western analysis, northern analysis and cloning is required.

Our location, in Wilmington, DE, offers an attractive lifestyle with easy access to all the cultural, academic and recreational activities of the Eastern Seaboard. The DuPont Merck Pharmaceutical Company can offer you an excellent compensation and benefits package. To be considered, please forward your resume to: Human Resources (SD-ISR), The DuPont Merck Pharmaceutical Company, Experimental Station, 400/2413, P.O. Box 80400, Wilmington, DE 19880-0400. An equal opportunity employer, M/F/D/V.

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POSTDOCTORAL RESEARCH SCIENTISTS

Battelle, Pacific Northwest National Laboratory, a leader in the development, application, and management of evolving state of the art technologies, is seeking experienced individuals to join a dynamic team. These positions require excellent verbal and written communication skills, and the ability to work as part of a team on multiple tasks. The work will be performed at Battelle, Pacific Northwest National Laboratory (PNNL) in Richland, WA. Salary range is \$30,000 - \$44,000 depending on level of experience.

CARBOHYDRATE CHEMIST/BIOCHEMIST: Ph.D. in Chemistry, Biochemistry, or related field, with expertise in carbohydrate chemistry required. Experience in carbohydrate separation and characterization also required. Experience in carbohydrate transformation by biological/chemical or physical processes desired.

ORGANIC/POLYMER CHEMIST: Ph.D. in Organic Chemistry, Polymer Chemistry, Biochemistry, or closely related field, with expertise in synthesis of nitroaromatic and nitramine chemicals and polymers required.

BIOCHEMIST: Ph.D. in Biochemistry, Microbiology, or closely related field, with expertise in the areas of protein production, purification and assay development required. Experience in the area of peptide modification/attachment and cell lysis desired.

PNNL will be accepting applications for these positions immediately. Interested individuals should reference the appropriate number and send a scannable resume or curriculum vitae to: Pacific Northwest National Laboratory, P.O. Box 999, MSIN P8-08, Richland, WA 99352, e-mail to: mm_shah@pnl.gov or fax to (376) 375-2329. Pacific Northwest National Laboratory is an Affirmative Action/Equal Opportunity Employer and supports diversity in the workplace. Minorities, Women, Vietnam-era veterans, and the disabled are encouraged to apply.



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Basic Stroke Research

The University of Calgary Department of Clinical Neurosciences invites applications for a full-time basic scientist in stroke research at the Assistant Professor level or higher. This position offers an excellent opportunity to develop an independent research program working as a member of a research team studying molecular mechanisms involved in cerebral ischemia. Duties will also include teaching and graduate student supervision.

Qualifications include an MD, PhD or equivalent, at least two years of postdoctoral training, and demonstrated expertise in molecular biology. The selected candidate must compete successfully for salary and establishment grant support from the Alberta Heritage Foundation for Medical Research and/or the Medical Research Council, and will have 75% of time protected for research.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary is committed to Employment Equity.

Please submit a curriculum vitae and the names of three referees, by February 6, 1998, to:

Dr. W.J. Becker, Acting Head
Department of Clinical Neurosciences
Foothills Hospital
1403 - 29 Street N.W.
Calgary, Alberta, Canada T2N 2T9



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CHIEF, LABORATORY OF PULMONARY PATHOBIOLOGY (LPP)
National Institute of Environmental Health Sciences
National Institutes of Health

The National Institute of Environmental Health Sciences (<http://www.niehs.nih.gov/>) in Research Triangle Park, North Carolina is recruiting a senior tenured investigator to run the Laboratory of Pulmonary Pathobiology. We are looking for a senior investigator with an international reputation in a specific area within the broad context of pulmonary pathobiology and its relationship to environmental influences. Investigators with clinical expertise and experience are particularly encouraged to apply. Possible specialized research areas include, but are not limited to, signal transduction mechanisms, receptor biology, immunology-hypersensitivity, inflammatory cell biology, extracellular matrix signaling, and developmental biology. The successful candidate will have an outstanding publication record and a proven history of research leadership, and will be expected to develop new initiatives in pulmonary research.

The LPP has existing research groups in the areas of airway cell biology and airway inflammation, and is beginning new studies on environmental influences leading to asthma development. The new recruit would be expected to provide leadership for the scientists within the LPP, and to provide a focus for collaborative efforts within the NIEHS. Level of appointment and salary will be commensurate with the experience and qualifications of the candidate. Excellent space and research support are available. The level of support will be commensurate with the rank at which the successful candidate is hired.

Applicants will require a Ph.D. and/or M.D. degree. Applications from women or members of minority groups are particularly welcome. Applicants should submit a curriculum vitae, a list of publications, reprints of up to five representative publications, a summary of past research, a plan for future research, and arrange for three letters of reference to be mailed by February 18, 1998 to: **Ms. Dara Trupe, Human Resource Management Branch, (HNV97-27), National Institute of Environmental Health Sciences, National Institutes of Health, P. O. Box 12233, Maildrop EC-11, Research Triangle Park, NC 27709; (919) 541-7513.**

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**CHAIRPERSON, ETIOLOGY AND PATHOGENESIS
COORDINATING COMMITTEE**

HEALTH SCIENTIST ADMINISTRATOR/MEDICAL OFFICER, Gs-14/15
NATIONAL INSTITUTES OF HEALTH ■ OFFICE OF AIDS RESEARCH

Serves as a senior advisor to the Director, Office of Acquired Immune Deficiency Syndrome (AIDS) Research (OAR) on issues concerning Etiology and Pathogenesis research on HIV infection and its sequelae; participates in the preparation of the NIH AIDS Etiology and Pathogenesis budget; represents the Director, OAR in this area to NIH and DHHS staff, research institutions, academia, media, and the general public; examines proposed policy changes in the conduct of HIV/AIDS research and advises NIH management regarding the impact and possible interpretation by a diverse range of groups and organizations including the health care providers and government.

As chairperson, for the Etiology and Pathogenesis Coordination Committee, the selectee is responsible for facilitating and coordinating efforts of the committee in strategic planning, identifying scientific opportunities, setting research priorities, and enhancing trans-NIH coordination and collaboration. Serves as an OAR ad hoc member of task forces, of groups or chairs special purpose groups dealing with HIV/AIDS related research.

Candidates should have knowledge of etiology and pathogenesis research of infectious agents, specifically related to HIV; skill in preparing organizational budgets; the ability to prepare verbal and written reports on complex scientific issues associated with AIDS-related etiology and pathogenesis research; skill in facilitating and coordinating committees identifying scientific opportunities and research priorities.

Candidates must have a minimum of a Bachelors degree in a health or allied science field. Possessing one or more of the following is highly desirable for candidates; a Ph.D. or M.D. degree; experience and accomplishments supported by publications in health or health related scientific journals; experience conducting independent health research at a level beyond the equivalent of a doctoral degree; experience working in a health research program.

This is a civil service position with a salary commensurate with experience. Please send a curriculum vitae, resume or an Optional Application for Federal Employment, OF-612 to the **National Institutes of Health, OD/EO/BMSO-A, Building 1, Room 332, 1 Center Drive MSC 0182, Bethesda, Maryland 20892-0182, Attn: OD-97-2006.** For additional information please contact Mr. Nelson Rodriguez at (301) 496-2511. Candidates must be U.S. citizens. **Applications must be postmarked by December 22, 1997.**

WE'VE GOT CAREERS



With a new state-of-the-art facility in Research Triangle Park, North Carolina, Covance Biotechnology Services provides the biotechnology and pharmaceutical industry with world-class process development and cGMP manufacturing for recombinant products. Join us as we put our clients' products and your career onto the fast-track. We are currently recruiting for the following key positions:

**■ SENIOR SCIENTIST
PURIFICATION DEVELOPMENT**

In this position, you will be responsible for the development of processes for the manufacturing of biopharmaceuticals and the transfer of these processes to Covance's cGMP manufacturing facility. A Ph.D. (or equivalent experience) in Biochemistry or Protein Chemistry is required. 5+ years of experience in protein purification and protein chemistry is also required along with knowledge in the areas of chromatographic methods, centrifugation, and ultrafiltration techniques. Relevant cGMP experience will be considered a significant plus. (Job Code: SC-121)

**■ SENIOR SCIENTIST
FORMULATION DEVELOPMENT**

In this position, you will be responsible for the development of formulations and formulation processes for protein therapeutics. You should be knowledgeable in the field of biophysical chemistry and in techniques to achieve protein formulations with long-term stability. You should have experience in developing formulations for lyophilization as well as lyophilization cycle development. Your analytical experience should include methods for quantitation of protein degradation and characterization of degradation products. A Ph.D. (or equivalent experience) in Biochemistry or Protein Chemistry and 5+ years of relevant experience is required. Relevant cGMP experience will be considered a significant plus. (Job Code: SC-122)

**■ SENIOR SCIENTIST
CELL CULTURE AND
FERMENTATION PROCESS DEVELOPMENT**

In this position, you will be responsible for the development of cell culture and fermentation processes for the manufacturing of biopharmaceuticals. You will also be involved with the transfer of these processes to Covance's cGMP manufacturing facility. Experience in computer monitoring and control of bioreactors is a plus. You should have a Ph.D. (or equivalent experience) in Cell Biology or Microbiology and 5+ years of relevant experience. (Job Code: SC-123)

**■ RESEARCH ASSOCIATES
ANALYTICAL PROTEIN CHEMISTRY**

In these positions, you will be responsible for the development of analytical procedures for the characterization and analysis of protein pharmaceuticals. Your analytical experience should include some of the following techniques: protein sequencing, peptide mapping, glycosylation analysis and other biochemical and biophysical protein analytical tools. Experience in transferring assays to a quality control group is also desired. A BS or MS in Chemistry or Biochemistry along with 3+ years of relevant experience is required. (Job Code: SC-124)

**■ MANUFACTURING ASSOCIATES
FERMENTATION/CELL CULTURE/PURIFICATION**

In these positions, you will be responsible for the manufacture of cell culture and/or fermentation products including protein purification. A BS degree in a technical area (or equivalent job-related experience) is required, along with 2+ years of hands-on experience in a cGMP environment, including experience with fermentors, bioreactors, centrifugation equipment, chromatographic and/or ultrafiltration systems. (Job Code: SC-125)

Please send resume with job code to: **Covance Biotechnology Services, Director-Human Resources, P.O. Box 13865, Research Triangle Park, NC 27709-3865; FAX: (919) 468-9070.** Only those selected for further consideration will be contacted. **PRINCIPALS ONLY.** Covance is an equal opportunity employer.

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High-Throughput Screening Dept. Scientist

The selected candidate will be responsible for DNA transfections (stable and transient), general molecular biology skills and tissue culture. Qualified candidates will possess a Ph.D. and 3+ years of industry experience. **Job Code #BK12/5**

Research Associates

The selected candidates will possess a BS/MS in life sciences and experience in the following areas: mammalian tissue culture techniques; transient and stable transfections; and general molecular biology techniques, including plasmid DNA, genomic DNA and RNA isolation, Northern, Southern and Western blots, as well as Expression vector construction. Qualified candidates will be team players with outstanding communication and problem-solving skills. Experience with high-throughput assays is a plus. **Job Code #HT12/5**

Cell Biology Dept. Scientist

The selected candidate will possess a Ph.D./M.D. and 5+ years laboratory experience in one of the following areas: Cellular Immunology, with concentration in T-cell immunology and antigen presentation; Cell Biology, with concentration in cell adhesion and migration, Chemotaxis and Cytoplasmic Ca²⁺ mobilization; or concentration in fibroblast, smooth and skeletal muscular cells. Experience in tissue culture, immunoassay, hemopoietic and flow cytometry growth factors. Qualified candidate will conduct studies in small animals with novel therapeutic proteins and be creative in developing novel in vivo/in vitro models. **Job Code #GG12/5**

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The Monterey Bay Aquarium Research Institute (MBARI) is seeking applicants for 2-year postdoctoral appointments in all areas of marine science and engineering. We are particularly interested in candidates in chemical oceanography, marine geophysics, marine biology, and biological oceanography. Founded in 1987 and supported by the David and Lucile Packard Foundation, MBARI is a nonprofit oceanographic research institute, dedicated to the development of state-of-the-art instrumentation, systems, and methods for scientific research.

Located in Moss Landing, California, the heart of the nation's largest marine sanctuary, MBARI emphasizes a balanced emphasis on science and engineering, with established programs in remotely operated vehicle (ROV) control technology, ocean physics, chemistry, geology, and biology, as well as information management and ocean instrumentation research and development. Fellowships may require occasional trips to sea.

MBARI's newly consolidated research center in Moss Landing, with a staff of 170 people, includes state-of-the-art science and engineering laboratories, as well as an operations facility to support its two research vessels. The Institute deploys a remotely operated vehicle to depths of 1,000 meters in the Monterey Bay for the purpose of scientific investigation, and recently launched a new advanced ROV, designed and built at the Institute, that takes unique research capabilities to depths of 4,000 meters.

Applicants should be recent Ph.D. recipients or 1998 degree candidates. Applications should be received by January 31, 1998, and must include: A curriculum vitae, at least three professional letters of recommendation, and succinct statements of both the applicant's doctoral research and the applicant's proposed research goals at MBARI. Selections will be announced by April 1, 1998. Please note that candidates must complete their Ph.D. degree prior to commencing the two-year appointment between October 1998 and March 1999.

To glimpse MBARI's current activities, please visit our World Wide Web page at <http://www.mbari.org>.

MBARI offers a competitive compensation package, including medical, dental, vision, and retirement benefits. First year salary is \$37,000; second year \$40,000. Interested individuals should address applications to: **MBARI, Human Resources: Postdoc-98, P.O. Box 628, Moss Landing, CA 95039.**

EOE

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The computer-aided molecular design (CAMD) lab at the Mayo Cancer Center/Pharmacology Department at Mayo Clinic Rochester seeks a research fellow with a Ph.D. in computational chemistry, organic chemistry, or related discipline to conduct design and computational screening of enzyme inhibitors.

The Mayo Clinic, with a research budget in excess of \$130 million per year, provides an outstanding environment for the conduct of basic research in molecular medicine. The CAMD Lab has records of developing biologically active ligands with real world impact (e.g., we developed the highly potent and selective, low-cost bis-THA, AChE inhibitor, which was reported by C & E News, News of the Week Section, September 30, 1996, and has been brought to commercial market by RBI/Sigma.) Resources include: NMR, mass spectrometry, fluorescence, research computing, and other core facilities; the state-of-the-art synthetic equipment; Origin 2000 (8xR10K, 2Gb memory and 72Gb disk), 3 Origin 200 (6xR10K, 896Mb memory and 13.5 Gb disk) and Octane (2xR10K, 128Mb and 4Gb disk) and three shared Power Challenge servers. Salary and benefits are competitive. Applicants contact:

Yuan-Ping Pang, Ph.D.

Department of Pharmacology

Mayo Clinic

200 First Street SW

Rochester, MN 55905

pang@mayo.edu

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Directors: Greenfield Sluder and David Wolf, University of Massachusetts Medical Center, Worcester.

Applications Due: March 10.

Microinjection Techniques in Cell Biology, May 19 - 26, 1998

Intensive hands-on training in state-of-the-art methods for introducing materials into living cells, organelles, and sub-cellular compartments. Light microscopy training and applications of video technology also included. Intended for grad students, postdocs and senior investigators.

Director: Robert B. Silver, Marine Biological Laboratory.

Applications Due: March 10

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Director: Colin S. Izzard, State University of New York, Albany.

Applications Due: August 4

Women and minorities are encouraged to apply. For application information, contact: Carol Hamel, Admissions Coordinator, Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543-1015; Phone: (508) 289-7401; E-mail: <admissions@mbi.edu> or download forms & information from the Internet Web: <<http://www.mbl.edu>>.



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Contributed Papers and Posters are invited for presentation in the general sessions in the following areas:

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- regulatory programs and policies
- environmental fate and modeling
- soil chemistry
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- innovative remedial technologies

Presentations for SPECIAL SESSIONS related to the following areas are encouraged:

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- state regulatory programs
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- cleanup standard setting
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PRINCIPLE INVESTIGATOR

- Ph.D. in Molecular Biology or equivalent with 6-10 yrs of proven technology or product development experience, capable of technically directing other scientists and technicians in development projects. Emphasis will be on nucleic acid detection and isolation, DNA amplification and DNA sequencing.

In addition to these positions Sigma is always interested in recruiting candidates with a strong background in Biology, Chemistry or related Life Science fields and an interest in production, QC, sales or technical services.

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EOE

Tenure-Track Positions Assistant Professor Equivalent

Biophysical Mechanisms of Calcium Microdomain Signaling

NIA's Laboratory of Cardiovascular Science is searching for a tenure track investigator who can devise creative, novel ways to measure calcium microdomain signaling *in situ*. The successful candidate will be expected to establish an independent research program using state-of-the-art biophysical methods of localized calcium signaling. A quantitative command of biophysical, physiological and mathematical issues involved in understanding localized intermolecular signaling is required, as well as the ability to conceptualize and implement experimental studies of calcium "sparks" and other localized signaling events. Candidates should submit applications to Ms. Theresa Niebuhr, Personnel Office, Gerontology Research Center, NIA, 4940 Eastern Avenue, Baltimore, MD 21224. Deadline date is December 31, 1997.

Pediatric Obesity

NICHD's Developmental Endocrinology Branch has re-opened its search for a tenure track scientist in the field of pediatric obesity. This clinical investigator will establish an independent, patient-based research program in the field of childhood obesity. The Branch has strong lab-based research programs in molecular and genetic aspects of metabolism

which may provide collaborative support for the clinical obesity program. The NICHD also has outstanding behavioral scientists offering the opportunity for collaboration in behavioral studies on the development or treatment of obesity, and the NIH Clinical Center offers advanced functional imaging technologies for non-invasive measurements of metabolic activity in human subjects. Deadline for applications is December 31, 1997. Applications should be sent to Ms. Sue Perdue, NICHD, Building 10, Room 10N262, 10 CENTER DR MSC 1862, BETHESDA MD 20892.

To Apply

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

WWW Site

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



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POSITIONS OPEN

The Developmental Therapeutics Department of the Medicine Branch is recruiting for a **TENURE-TRACK POSITION** within the Division of Clinical Sciences, National Cancer Institute, National Institutes of Health.

Applicants need to have an M.D. and/or Ph.D. and be U.S. citizens or permanent residents. Preference will be given to candidates who are Board-certified or -eligible in medical oncology. The qualified applicant should be interested in developing an independent research program on the morphological, genetic, and/or biochemical characterization of smoking-related malignancies and their precursor lesions. Candidates will be expected to participate in translational programs studying patients at risk for developing smoking-related cancers (especially lung cancer). Successful candidates should have experience in addressing disease-oriented questions using molecular genetic and/or cellular pharmacology approaches. Space, technical support, and salary are committed.

The application should include a cover letter, curriculum vitae, bibliography, a one- to two-page statement of research interests and goals, and selected publications (three to five) to the address listed below. Please arrange to have letters of recommendation sent from three references who can provide an evaluation of your professional qualifications.

The completed applications should be postmarked by February 10, 1998, to:

James Mitchell, Branch Chief (Chairperson)
Radiation Biology Section
Building 10, B3B69
8900 Wisconsin Avenue
Bethesda, MD 20892-1002
Telephone: 301-496-7511
FAX: 301-480-2238

NIH is an Equal Opportunity Employer.

Montana State University-Bozeman invites nominations and applications for the position of **DEAN OF THE COLLEGE OF LETTERS AND SCIENCE**. The Dean is the Chief Academic and Executive Officer of the College and reports directly to the Provost. The Dean will lead the College, distinguished for excellence and innovation, in its teaching, research, and creative activities; promote collaboration among programs within the college; and coordinate the curricular, research, outreach, and service programs of the College. More detailed information can be obtained over the Internet, [website: http://www.montana.edu/msuinfo/jobs/prof](http://www.montana.edu/msuinfo/jobs/prof).

Required qualifications include earned terminal degree in a discipline represented within the College and a record of achievement so as to qualify for a tenurable appointment; demonstrated excellence in teaching; an established national reputation for excellence in research or creative activity; experience in academic administration; demonstrated ability to work with, motivate, and support faculty, students, and staff; and demonstrated commitment to equity and diversity; a multidisciplinary perspective and appreciation for all disciplines represented within the college; evidence of outstanding communication skills and leadership ability.

Screening begins January 19, 1998, and continues until position is filled. For complete list of qualifications and applications procedures, contact: **J. B. Bancroft, Chair, Dean of Letters and Science Search Committee, 217 Cheever Hall, Montana State University, Bozeman, MT 59717-3700. Telephone: 406-994-4405; e-mail: zah7001@montana.edu.**

Americans with Disability Act/Equal Opportunity/Affirmative Action/Veterans preference.

TENURE-TRACK FACULTY POSITIONS CANCER RESEARCH ALBANY MEDICAL CENTER

As part of the reorganization of basic research at Albany Medical Center, the Pathogenesis Theme invites applicants to fill three available tenure-track faculty positions. Applicants should have at least three years of postdoctoral experience and will be expected to establish independent research projects in cancer-related topics, such as molecular genetics, cell cycle control, stem cell biology, or immunology. Opportunities are available for translational research through the Cancer Center. Candidates selected will have newly renovated research space and funds to start their programs. Please forward curriculum vitae, summary of research interests and future plans, as well as two representative reprints and three letters of reference to: **Stewart Sell, M.D., Department of Pathology and Laboratory Medicine, A-81, Albany Medical Center, Albany, NY 12208-3479. E-mail: stewart_sell@ccgateway.amc.edu.**

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION IN CRANIOFACIAL DEVELOPMENT Rochester Institute of Biomedical Sciences University of Rochester Medical Center

The Rochester Institute of Biomedical Sciences (RIBS) is seeking applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. The successful candidate will be expected to establish both independent and collaborative research programs in areas such as neural crest biology, tooth or palate formation, or aspects of connective tissue or bone biology as they relate to the development of the orofacial complex.

RIBS is a newly founded research institute in which multidisciplinary studies in aging and development, cancer biology, oral biology, and vaccine biology will be emphasized. In addition to their RIBS appointment, faculty will also be appointed to an academic department within the University.

Send cover letter, curriculum vitae, copies of selected publications, and a brief summary of future research plans, together with the names of at least three references by January 30, 1998, to: **Dr. Lawrence A. Tabak, Director, Center for Oral Biology, RIBS, 601 Elmwood Avenue, Medical Center Box 611, University of Rochester, Rochester, NY 14642.**

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

FACULTY POSITION DEPARTMENT OF OBSTETRICS/ GYNECOLOGY

University of Colorado Health Sciences Center

The Department invites applications for a faculty scientist position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level available July 1, 1998. Major responsibilities include development of an independent, externally funded research program on the clinical problems affecting women, with emphasis on molecular mechanisms. Minimal requirements include a doctoral degree (Ph.D., M.D., or equivalent) and two years of relevant postdoctoral experience. The successful candidate will have a joint appointment in an appropriate basic science department. Submit curriculum vitae, description of research interests, summary of active and pending research grants, reprints of two or three major publications, and names of three professional references to: **Dr. Kimberly Leslie, Department of Obstetrics/Gynecology, Campus Box B-198, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. The University of Colorado Health Sciences Center is an Equal Opportunity/Affirmative Action Employer.**

TENURE-TRACK POSITION BIOLOGY

The Department of Biology invites applications for a tenure-track position commencing September 1, 1998. Requires a Ph.D. degree with primary specialization in ecology with additional expertise in environmental biology preferred. Teaching in areas of specialization and also introductory biology and science core courses for non-majors. The successful candidate is expected to carry out a research program involving undergraduate students.

Dowling College is a fully accredited, independent, coeducational, liberal arts college with outstanding graduate programs in business administration and education. The College is located on the south shore of Long Island, 50 miles from Manhattan.

The College offers excellent benefits along with a competitive salary. Interested individuals should submit curriculum vitae and a statement of teaching philosophy as well as a description of current research and long-term research interests to: **Human Resources Department, Dowling College, Idle Hour Boulevard, Oakdale, Long Island, NY 11769-1999. Equal Opportunity/Affirmative Action Institution.**

DEAN COLLEGE OF SCIENCE, ENGINEERING, AND TECHNOLOGY Mankato State University

Mankato State University seeks applications and nominations for the position of Dean, College of Science, Engineering, and Technology. Deadline: January 15, 1998. Contact: **Dr. Susan Coultrap-McQuin, Telephone: 507-389-1095; e-mail: scoultra@mankato.msus.edu. Affirmative Action/Equal Employment Opportunity.**

POSITIONS OPEN

FACULTY POSITION UNIVERSITY AT ALBANY STATE UNIVERSITY OF NEW YORK Program in Biodiversity, Conservation, and Policy

The Department of Biological Sciences is recruiting an **ASSOCIATE PROFESSOR** (tenured) or advanced **ASSISTANT PROFESSOR**. Applicants should have backgrounds in basic research and teaching in conservation biology and ecology. We seek a person with expertise in empirical field studies and a strong commitment to biological conservation. The successful candidate will have the opportunity to play a leading role in the continued development of our new interdisciplinary Master's program in biodiversity, conservation, and policy, in conjunction with the Rockefeller College of Public Policy and Administration, and participate in our Ph.D. Program. Research interests in the department include: ecology, evolution, behavior, molecular biology, cell and developmental biology, and neurobiology, with a new emphasis on comparative functional genomics. See our [website: http://www.albany.edu/biology/index.html](http://www.albany.edu/biology/index.html). The successful candidate is expected to teach at the undergraduate and graduate levels, train M.S. and Ph.D. students, and maintain an externally funded research program. Position begins fall, 1998.

Send curriculum vitae, statements of teaching and research interests, and arrange to have three letters of reference sent to: **Chair of Biodiversity Search Committee, Department of Biological Sciences, University at Albany, 1400 Washington Avenue, Albany, NY 12222. Deadline for applications is February 1, 1998.**

The University at Albany is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN MOLECULAR HOST-PATHOGEN INTERACTIONS

The Department of Biological Sciences at Bowling Green State University invites applications for a tenure-track position in molecular host-pathogen interactions beginning August 1998. **ASSISTANT PROFESSOR** preferred; all ranks considered. Applicants are expected to have a Ph.D. and postdoctoral experience and conduct an extramurally funded research program involving M.S./Ph.D. students. Candidates should have a primary research interest in prokaryotic or eukaryotic pathogens and their hosts, and be able to interact with molecular, plant, microbiology, and entomology/parasitology groups. Teaching will consist of undergraduate/graduate courses in molecular biology and/or microbiology and area of specialization. Service activity is also expected. Applicants should submit a curriculum vitae, three reference letters, statement of research and teaching goals, and not more than four reprints by January 15, 1998, to: **Dr. Doris Beck, Search Committee Chair, Department of Biological Sciences, Bowling Green State University, Bowling Green, OH 43403-0212.** For additional information, visit our [website: http://www.bgsu.edu/departments/biology](http://www.bgsu.edu/departments/biology). *Bowling Green State University is an Affirmative Action/Equal Employment Opportunity Employer and encourages applications from women, minorities, veterans, and persons with disability.*

FACULTY POSITION PHARMACOLOGY

The Department of Pharmacology at the University of Nebraska Medical Center invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** OR **HIGHER** level. We are looking for an individual with a strong research record and evidence of the ability to maintain an extramurally funded research program. Individuals with research interests in neuroscience, particularly molecular approaches to studying neurodegenerative diseases, are particularly invited to apply. A competitive salary and start-up package will be provided. Review of applications will begin January 30, 1998, and continue until the position is filled. Further information on the department is available at [website: http://www.unmc.edu/Pharmacology/](http://www.unmc.edu/Pharmacology/). Applicants should submit a curriculum vitae, summary of research accomplishments, future research plans, and names of three references to: **Dr. Charles Murrin, Chair, Search Committee, Department of Pharmacology, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-6260. The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer. Women and minority members are especially encouraged to apply.**



University of Alberta
Edmonton

Assistant or Associate Professor

Faculty of Medicine

The Cardiovascular Research Group of the Faculty of Medicine is seeking a tenure-track faculty member in the area of the cellular and molecular control of the cardiovascular system. Individuals with a PhD or MD degree with expertise in the area of cellular, molecular, electrophysiological, or biophysical aspects of the cardiovascular system are encouraged to apply. The successful candidate will be expected to pursue a vigorous, externally funded research program, which includes the training of graduate students.

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.

Applicants should send a curriculum vitae, a one-page summary of their research plans, and the names, addresses and telephone numbers of three referees to:

Dr. Gary D. Lopaschuk,
Cardiovascular Research Group
423 Heritage Medical
Research Building
University of Alberta
Edmonton, Alberta, Canada
T6G 2S2

Fax: (403) 492-9753

e-mail: gary.lopaschuk@ualberta.ca

Applications will be reviewed
beginning January 31, 1998.

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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Since our inception in 1897 we have been at the forefront in the development and manufacture of human biological products and vaccines. From producing smallpox vaccine for U.S. troops during the Spanish American War to exploring the future of immuno-potentiation, we are dedicated to excellence in every phase of our operation.

Right now, we are seeking an innovative individual capable of managing a dynamic team involved in the manufacture and development of biologicals. The successful candidate will be responsible for all aspects of biological manufacturing including planning & scheduling, production operations, new product planning and all related documentation. Will also be involved in the design of production equipment and facilities.

This challenging position requires a Ph.D. in chemical/biochemical engineering, microbiology or biochemistry and at least 5 years experience in the manufacture of biological products. Experience in microbial fermentation, bioprocess recovery and/or process control using cGMP is essential.

As a member of the Rhône-Poulenc Group, we offer an attractive salary/benefits package, ongoing opportunities for continuing education and professional development, and the satisfaction of working for a leading edge company with an exceptional record of success in the global marketplace.

For consideration, forward your resume with compensation history/requirements in confidence to: Human Resources, Dept. BMM, Pasteur Mérieux Connaught, P.O. Box 187, Route 611, Swiftwater, PA 18370. Only those candidates best qualified will be contacted. We are an equal opportunity employer M/F/D/V.



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Headquartered in a 66,000 square foot, state-of-the-art research facility in the San Francisco Bay Area, Tularik Inc. is a rapidly growing, privately-held biopharmaceutical company dedicated to the discovery and development of novel therapeutic agents that regulate gene expression. We have ongoing projects in the following areas: immune disorders, inflammation, obesity, hypercholesterolemia, viral diseases, bacterial diseases, and cancer. Our continued growth and outstanding research culture has created a rare opportunity for a select group of dedicated professionals to join our team and help us shape the future of human therapeutics.

SCIENTIST Pharmacokinetics

We are looking for an experienced pharmacokineticist to join our growing Pharmacology and Preclinical Development group. Applicants must have a Ph.D. in Analytical Chemistry, Pharmacology, Pharmaceutical Sciences or related discipline and a minimum of 5 years of industry experience. The successful candidate will provide pharmacokinetic/ADME input to evaluate early drug leads and to guide preclinical development. Extensive experience in analytical method development for drug candidates and their metabolites in biological matrices, including parallel dosing experience, is essential. (Position Code PH1)

RESEARCH ASSOCIATE Pharmacokinetics

Qualified candidates will have a MS/BS in (Analytical) Chemistry with 3-5 years of ADME/PK laboratory experience and hands-on analytical expertise. Pharmacokinetic analysis experience using appropriate software and drug formulation expertise are strongly preferred. (Position Code PH2)

In addition to an attractive total compensation package, including competitive salary, comprehensive benefits and equity participation, Tularik offers experienced leadership and a stimulating research environment that recognizes achievement. To apply, please send, fax or e-mail your resume to:

Tularik Inc.
Human Resources
Attn: Position Code
Two Corporate Drive
South San Francisco, CA 94080
Fax: (650) 829-4303
E-mail: timmermans@tularik.com

www.tularik.com



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POSITIONS OPEN

ASSISTANT PROFESSOR MOLECULAR PHYSIOLOGY

The Department of Physiology at the University of Maryland School of Medicine is seeking a tenure-track Assistant Professor with research interests in molecular and cellular physiology. Individuals employing molecular techniques to investigate mechanisms of signal transduction are particularly encouraged to apply. Ph.D. or M.D., at least two years of postdoctoral experience, and the ability to develop an independent research program required. Research interests should complement one or more existing departmental strengths in cardiovascular, neural, renal, and reproductive physiology (see our website: <http://physiomed.ab.umd.edu>).

The position offers competitive start-up funds, laboratory space, salary, and benefits. Send curriculum vitae, statement of research interests, and names of three referees to: **R. J. Bloch, Ph.D., Physiology Search Committee, Department of Physiology, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201.** Submit by January 5, 1998, for full consideration; position available July, 1998. *The University of Maryland, Baltimore is an Affirmative Action/Equal Opportunity Employer and has a strong institutional commitment to the principle of diversity in all areas.*

MICROBIOLOGIST

The Department of Veterinary Pathobiology in the Purdue University School of Veterinary Medicine invites applications for a tenure-track faculty position in the Section of Microbiology, Immunology, and Public Health at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. The Department has 26 faculty members and 37 graduate students. Newly constructed and recently renovated research facilities are available. Responsibilities of the position include organizing and teaching microbiology and infectious disease courses in the undergraduate and graduate veterinary medicine curricula and development of an extramurally funded research program.

Qualifications for the position include a Ph.D. degree and experience in microbiology. Experience in molecular pathogenesis of animal diseases or animal models of human diseases and excellent communication skills are required. The D.V.M. or an equivalent degree is desirable. Salary will be commensurate with qualifications and experience. Review of applicants will start on March 15, 1998, and continue until the position is filled.

Applicants should submit curriculum vitae, names of three references, and a letter of professional interests and aspirations to:

H. Leon Thacker, D.V.M., Ph.D.
Department of Veterinary Pathobiology
1243 Veterinary Pathology Building
Purdue University School of Veterinary Medicine
West Lafayette, IN 47907-1243

Purdue University is an Affirmative Action/Equal Opportunity Employer/Educator. Women and minority applicants are strongly encouraged to apply.

BIOLOGY, ASSISTANT PROFESSOR. The Department of Biology at Shippensburg University invites applications for a tenure-track position starting August 1998. The successful candidate will be required to have completed a Ph.D. and have two years of teaching experience. Primary teaching responsibilities will include immunology, microbiology, and introductory biology. An ability to teach hematology and/or virology is preferred. A strong commitment to undergraduate teaching is essential. A demonstration of teaching effectiveness will be required as part of the interview process. Scholarly activity will be expected in the area of the candidate's specialty. Applicants must send curriculum vitae, copies of transcripts (both graduate and undergraduate), a statement of teaching philosophy and research interests, and three letters of reference to: **Chair, Immunology Search Committee, Department of Biology, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257-2299.** The deadline for receipt of complete applications has been extended to January 21, 1998. *Shippensburg University is committed to Equal Employment Opportunity. Women, persons of color, veterans, and the disabled are encouraged to apply.*

POSITIONS OPEN

APPLIED/ENVIRONMENTAL MICROBIOLOGIST

The Department of Biology at the University of South Florida (USF) anticipates hiring an **ASSISTANT PROFESSOR** in applied or environmental microbiology for a nine-month, tenure-track position to begin August 1998. Applicants must have a Ph.D., with postdoctoral research experience preferred. The successful candidate must establish a vigorous, externally funded research program, train M.S. and Ph.D. students, and teach undergraduate and graduate courses in microbiology. The Department of Biology (website: www.cas.usf.edu/biology/index.html) currently has 32 faculty, with strong programs in ecology and microbiology. Collaborations are encouraged with other Departments and interdisciplinary programs such as Geology, Marine Science, Engineering, Environmental Science and Policy, and the Institute for Biomolecular Science. USF, the second largest university in Florida, offers competitive start-up funds and salary, with modern research facilities available in a new bioscience building. Applications, including curriculum vitae, statements of teaching and research interests, relevant reprints, and three letters of recommendation, should be sent for receipt by January 30, 1998, to: **Microbiology Search Committee, Department of Biology, University of South Florida, 4202 East Fowler Avenue, Tampa, FL 33620-5150.** *University of South Florida is an Equal Opportunity/Affirmative Action/Equal Access Institution. For disability accommodations Telephone: 813-974-3250.*

FACULTY POSITION IN EVOLUTIONARY BIOLOGY UNIVERSITY OF NEVADA, RENO

Tenure-track position, academic year appointment at the **ASSISTANT PROFESSOR** level. Responsibilities include developing a strong, externally funded research program, teaching graduate and undergraduate courses, and mentoring graduate students. Ph.D. in a biological science, postdoctoral and teaching experience, and publications required. Salary commensurate with experience. Information on the Department and a complete position description can be found at website: <http://www.scs.unr.edu/unr/arts-n-science/biology/biology.html>. Send curriculum vitae, description of research and teaching interests, and the names, addresses, telephone numbers, and e-mail addresses of at least three references to: **Chair, Evolutionary Biology Search Committee, Department of Biology/314, University of Nevada, Reno, NV 89557.** Review of applications will begin on February 2, 1998. *The University of Nevada, Reno, is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are especially urged to apply.*

TENURE-TRACK FACULTY POSITION IN ECOLOGY

The Department of Biology at Temple University anticipates an opening for a tenure-track **ASSISTANT PROFESSOR** position in ecology to begin fall, 1998. The successful candidate is expected to establish a grant-supported research program and contribute significantly to undergraduate and graduate education. The research area is open; however, areas of particular interest include behavioral, evolutionary, and physiological ecology. Applications must include curriculum vitae, three letters of reference, statements of teaching philosophy, and current/future research plans. Send applications by January 22, 1998, to: **Ecology Search Committee, Department of Biology, Temple University, Philadelphia, PA 19122.** *Equal Opportunity Employer/Affirmative Action.*

CREIGHTON UNIVERSITY HISTOLOGY

Creighton University, a Catholic, Jesuit institution is initiating a search for a **HISTOLOGIST** for a full-time, tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level in the Department of Oral Biology. Responsibilities include teaching general histology, oral histology, and oral embryology. Candidates must have ability to conduct independent research and opportunities for collaborative research are available. Qualifications include a Ph.D. or equivalent degree. Send letter of interest and curriculum vitae with list of three references to: **Dr. Joseph Keene, Chair, Department of Oral Biology, Creighton University School of Dentistry, 2500 California Plaza, Omaha, NE 68178.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

EXPERIENCE EMORY UNIVERSITY TENURE-TRACK FACULTY POSITION NEUROPHYSIOLOGIST

Position description. The Physiology Department at Emory University is soliciting applications for the position of **ASSOCIATE** or **FULL PROFESSOR**, beginning in the summer of 1998. We are seeking an established Neurophysiologist focused on motor function and dysfunction (e.g., spinal injury, motoneuron disease) in the spinal cord. Applications including curriculum vitae, a brief statement of research interests, and three letters of reference should be mailed to: **Dr. Robert B. Gunn, Chairman, Department of Physiology, Emory University School of Medicine, Atlanta, GA 30322.** New applications will be considered through December 1997 or until position is filled.

Emory University is an Equal Opportunity/Affirmative Action Employer.

ECOLOGIST POPULATION/COMMUNITY ECOLOGY

The Department of Biology and Wildlife and the Institute of Arctic Biology at the University of Alaska Fairbanks invite applications for a tenure-track joint appointment at the rank of **ASSISTANT PROFESSOR** in population/community ecology, with expertise in terrestrial insect ecology. Areas of research focus may include, but are not restricted to, predator-prey interactions, insect population dynamics, insect-plant interactions, or insects as components of ecosystems. Candidates using molecular approaches are particularly urged to apply. We also encourage applications from those interested in issues of both basic and applied research in high latitude ecosystems. The successful candidate is expected to develop an active, externally funded research program, teach two courses per year, which may include population ecology or community ecology, and participate in graduate training in ecology. Ph.D. or equivalent in biology or closely related field is required. Preference will be given to candidates with postdoctoral and university teaching experience and a strong publication record. The successful applicant will be provided with research space and start-up funds by the Institute of Arctic Biology. Extensive analytical facilities and opportunities for collaborative research exist within the Taiga LTER program, and within University research programs in molecular biology, physiology, forestry, and population, community, and ecosystem ecology. To apply, send curriculum vitae, statements of research and teaching interests and philosophy, representative reprints, and have at least three letters of reference sent to: **Dr. Roger W. Ruess, Ecologist Search, Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks, AK 99775-7000.** Website: <http://www.uafbio.alaska.edu>; Telephone: 907-474-7153. Review of applications will begin February 1, 1998, and continue until a suitable candidate is identified. *Women and minorities are especially encouraged to apply. University of Alaska Fairbanks is an Affirmative Action/Equal Opportunity Employer.*

Environmental studies: **TEACHING POSITION.** The Human and Natural Ecology Program of Emory University invites applicants for a teaching position at the rank of **LECTURER** (non-tenure-track) for a one-year term (potentially renewable) beginning in September 1998. A Ph.D. degree is necessary. The successful applicant will have training in an environmental science, preferably with expertise in energy issues, and have an interdisciplinary view of environmental topics. Excellent teaching skills and the ability to collaborate across disciplines, including the social sciences, are required. Familiarity with computers for teaching and communication is desired. Teaching responsibilities, all at the undergraduate level, include a course on energy, natural resources, and environmental change (ideally using a case-based approach and including economics as a force of change); a course on applied quantitative methods; and a senior thesis course. Additional responsibilities include advising students and other administrative tasks. Send a letter addressing how you meet our criteria, curriculum vitae, a separate statement of teaching philosophy, and three letters of recommendation to: **Dr. Paula J. S. Martin, Human and Natural Ecology Program, 625 Rollins Way, Emory University, Atlanta, GA 30322.** Closing date is February 1, 1998. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

Postdoctoral Positions in Transgenic Mouse Models of DNA Repair and Recombination

The DNA Damage and Repair Group in the Life Sciences Division of Los Alamos National Laboratory is seeking postdoctoral candidates to study the biological consequences of deficiencies in DNA repair or recombination using transgenic mouse models. The specific emphasis of this project is to determine the roles of DNA repair and recombination proteins in embryo development, immunodeficiency, cancer susceptibility and aging. The successful candidate(s) will join a multidisciplinary team to investigate the phenotype of transgenic mice (or cell lines established from transgenic mice) that have been established in the lab, as well as to establish transgenic mouse models for new DNA repair and recombination genes. Applicants should have strong training in cell and molecular biology. Experience with ES cell culture, knockout vector construction, mouse/ES cell genotyping, embryo manipulation, and phenotypic analysis of transgenic mice are highly desirable. For technical questions contact Dr. David J. Chen by FAX at (505) 665-0123, e-mail: dchen@lanl.gov.

A Ph.D. in Genetics, Molecular Biology, Cell Biology or Developmental Biology, completed within the last three years or soon to be completed, is required. Competitive salary and comprehensive benefits package included.

For consideration, submit TWO COPIES of a curriculum vitae and publications list along with research interests to:

Postdoc Programs

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Los Alamos National Laboratory
Los Alamos, NM 87545

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students a rich heritage along with the latest in instructional and research technology. The University of Delaware is a Land-Grant, Sea-Grant and Space-Grant institution, with its main campus in Newark, Del., located midway between Philadelphia and Baltimore.

TWO FACULTY POSITIONS IN MOLECULAR CELL BIOLOGY

The Department of Biological Sciences is proceeding with a major initiative to strengthen cellular and molecular biology. In addition to the hiring of a number of new faculty members, we are building a state-of-the-art cell biology core facility with capabilities for automated DNA sequencing and confocal microscopy. At this time, we invite applications for two tenure-track faculty positions at the ASSISTANT, ASSOCIATE, or FULL PROFESSOR level. Candidates must have a Ph.D. or equivalent and a minimum of two years postdoctoral experience. The successful individuals will establish a strong extramurally funded research program and participate in undergraduate- and graduate-level teaching. Preference will be given to outstanding candidates who are supported by federally funded grant(s). We seek individuals with a research interest in the broad area of cell signaling. This includes the disciplines of molecular endocrinology, cancer biology, neurobiology, gene expressions, and mammalian development.

The starting date for these positions is September 1, 1998 or earlier. Review of applications will begin upon receipt. Closing date for applications is February 1, 1998. Applicants should submit a complete curriculum vitae, selected reprints, a description of research interests and goals, and have three letters of reference sent to Dr. Patricia A. DeLeon, Chair, Faculty Search Committee, Department of Biological Sciences, University of Delaware, Newark, DE 19716-2590. Telephone: (302) 831-6977, FAX: (302) 831-2281, E-mail: pdeleon@udel.edu.

The UNIVERSITY OF DELAWARE is an equal Opportunity Employer which encourages applications from Minority Group Members and Women.

ANNOUNCEMENTS

James S. McDonnell Foundation Request for Proposals New Guidelines for 1998

New application guidelines for the following programs are available on the Foundation's web site:

1. Eastern European Cognitive Neuroscience and Cognitive Science Program

This program provides special, short-term support for collaborative research projects in cognitive neuroscience or cognitive science proposed by researchers in Eastern Europe (EE), Central Europe (CE) or the Commonwealth of Independent States (CIS) and their North American or Western European colleagues. In 1998, the Foundation will award up to \$500,000 in support of collaborative research of this nature. **The deadline for application is August 4, 1998.**

2. Pilot Projects in Cognitive Rehabilitation Research

This program will award up to \$600,000 annually in support of cognitive rehabilitation research carried out by interdisciplinary teams of cognitive neuroscientists, cognitive psychologists, and rehabilitation professionals. Proposed projects should address how the research findings on brain plasticity, brain structure/function relationships, cognitive science, studies of learning, and information processing theory can be applied to the design of clinical interventions to help individuals with acquired brain injuries improve their performance of functional, real-world tasks (e.g., self-care, meal preparation, tasks related to employment, etc.). Research teams proposing to identify the cognitive or neurobiological substrates of functional recovery (i.e. cortical reorganization, using new cognitive strategies), with the goal of developing cognitive therapies, are also appropriate for the RFP. **The deadline for applications is March 30, 1998.**

Please review the guidelines before preparing an application. Guidelines for these and other McDonnell Foundation programs and the McDonnell-Pew Program in Cognitive Neuroscience are posted on the Foundation's web site at <http://www.jsmf.org>. If you do not have access to the Internet, a copy of the guidelines can be obtained via email, info@jsmf.org or by calling 314-721-1532. The Foundation encourages you to use the Internet or email. Contact: Susan M. Fitzpatrick, Ph.D., Program Officer, The James S. McDonnell Foundation, Suite 1850, 1034 S. Brentwood Blvd., St. Louis, MO 63117.

Congratulations to this year's winners of the Johnson Research Foundation Prize for their "adventurous and innovative research in structural biology"

Timothy J. Richmond

of Eidgenössische Technische Hochschule Zürich
Institut für Molekularbiologie und Biophysik for his studies
on the structure of the nucleosome core of chromatin
and

Stephen L. Mayo

of the California Institute of Technology
for his research on protein design automation

The Awards Ceremony and Lectures
will be held on Monday, December 15, 1997
at the University of Pennsylvania School of Medicine

PREVIOUS WINNERS INCLUDE:

- 1994: Douglas Rees and John Walker
- 1995: Mitch Lewis and Hartmut Michel
- 1996: Nikola Pavletich and Jennifer Doudna



And a hearty congratulations to John Walker
on receiving a Nobel Prize for Chemistry!

POSITIONS OPEN

CELLULAR/MOLECULAR PHYSIOLOGY

The Department of Basic Medical Sciences invites applications for a full-time, tenure-track **ASSISTANT** or **ASSOCIATE PROFESSOR**. A Ph.D. or equivalent degree and at least three years of postdoctoral experience are required. The successful candidate will be expected to develop a creative, extramurally funded cancer-related research program, complementing existing programs within the department, school, and the NCI-designated Purdue Cancer Center. An emphasis on cell or molecular physiology is required. The successful candidate will have teaching responsibilities in physiology; a commitment to excellence in one or more of our educational programs, including courses to graduate, veterinary, and medical students; and a commitment to the goals of the department and school are important. Research areas of interest include extracellular matrix, cell growth, signal transduction, microcirculation, and angiogenesis. Resources include: DNA/protein synthesis and sequencing, antibody production and transgenic mouse facilities, confocal and electron microscopy, flow cytometry and image analysis facilities. Applicants should send a curriculum vitae, relevant reprints, a one- to three-page description of research and teaching goals, and a list of three references (including address, telephone, FAX, and e-mail) to: Dr. J. Paul Robinson, Search Chairman, School of Veterinary Medicine, Lynn Hall, Purdue University, West Lafayette, IN 47907-1246. Review of applications will begin December 22, 1997. Applications will be accepted until the position is filled. Anticipated starting date is July 1, 1998. Additional information is available via e-mail: paul@flowcyt.cyto.purdue.edu; website: www.vet.purdue.edu/depts/bms. Minority and female applicants are encouraged to apply. Purdue University is an Equal Opportunity/Affirmative Action Employer.

ASSOCIATE VICE PRESIDENT FOR RESEARCH (IU) and VICE CHANCELLOR FOR RESEARCH AND GRADUATE EDUCATION (IUPUI)

Indiana University is seeking an individual to serve as Associate Vice President for Research, Indiana University (IU) and Vice Chancellor for Research and Graduate Education for the Indiana University/Purdue University, Indianapolis (IUPUI) campus. This person will coordinate research and administer graduate programs for the IUPUI campus and will promote interdisciplinary collaboration for graduate programs across all IU campuses and Purdue University. Additional responsibilities will include organization of IUPUI's involvement in enterprises sponsored by private firms, or city or state agencies. The position requires an individual with a broad vision for research and graduate education on multiple campuses who is able to facilitate the establishment of collaborative programs. Candidates should possess an M.D. and/or Ph.D. degree, have experience in basic and/or applied research, graduate education, and administration in an academic environment. Send personal statement, curriculum vitae, and references to: Robert B. Jones, M.D., Ph.D., Chair, Search/Screen Committee, Fesler Hall 302, 1120 South Drive, Indianapolis, IN 46202-5114.

Indiana University is an Affirmative Action/Equal Opportunity Employer, Minorities/Females.

ASSISTANT PROFESSOR OF REMOTE SENSING MOUNTAIN RESEARCH CENTER Montana State University, Bozeman

Ph.D. in application of remote sensing to ecological research in earth science or plant, soils, and environmental science. Demonstrated ability to conduct research and publish results. Experience with digital image processing software and linking remote sensing and GIS. Preferred record of effective work in inter- and multidisciplinary teams, demonstrated ability to obtain competitive grants for support of research, teach remote sensing courses, and to communicate effectively with scientists from a variety of disciplines. Submit résumé, letter explaining relevant research, teaching, and interdisciplinary activities, showing how these relate to the selection criteria, and contact information for three references to: Richard Aspinall, Chair, Remote Sensing Search Committee, Geographic Information and Analysis Center, Box 173490, Montana State University, Bozeman, MT 59717. Screening begins January 5, 1998. Website: www.montana.edu or www.mrc.montana.edu for details. Americans with Disabilities Act/Equal Opportunity/Affirmative Action/Veterans preference.

POSITIONS OPEN



Wayne State University

ASSISTANT/ASSOCIATE PROFESSOR OF ANATOMY AND CELL BIOLOGY TENURE-TRACK

The Department of Anatomy and Cell Biology, Wayne State University School of Medicine invites applications at the Assistant/Associate Professor level. We seek an individual with contemporary expertise in developmental neurobiology to complement the research foci in the department of neuroscience and visual sciences. The successful candidate will be expected to have or establish a well-funded independent research program and to participate in teaching. Excellent start-up funds and laboratory space are available. Applicants should have a Ph.D. or M.D. degree and postdoctoral experience. The Search Committee will accept applications until March 1, 1998. Candidates should submit a letter, a curriculum vitae, and the names of three references to: Linda Hazlett, Ph.D., Chair, Department of Anatomy and Cell Biology, Wayne State University School of Medicine, 540 East Canfield, Detroit, MI 48201.

Wayne State University is an Equal Opportunity/Affirmative Action Employer. All buildings, structures, and vehicles at WSU are smoke-free. Wayne State University—People working together to provide quality service.

DIRECTOR, RESEARCH DIVISION DEPARTMENT OF PATHOLOGY LSU SCHOOL OF MEDICINE-SHREVEPORT

The Department of Pathology is seeking a Director for its Research Division. The appointment will be at the **ASSOCIATE** or **FULL PROFESSOR** level, depending on qualifications, and is open to individuals possessing either M.D., Ph.D., or M.D.-Ph.D. degrees. Applicants must have a track record of research excellence, current grant funding, and experience mentoring graduate students and postdoctoral fellows. The responsibilities of the position include the organization of research activities within the Department and developing multidisciplinary interdepartmental research endeavors. The successful candidate will have limited teaching/clinical responsibilities.

The overall theme of focus of the Research Division is in extracellular matrix, and the ideal candidate should have interest/expertise in either cell adhesion and signaling, cell to matrix interactions, growth factors, or gene expression. However, other areas of research not listed here but relevant to the theme of the Division will receive consideration.

Applicants should submit a curriculum vitae and a brief description of research interests and directions to: Guillermo A. Herrera, M.D., Professor and Chairman, Department of Pathology, Louisiana State University Medical Center-Shreveport, P.O. Box 33932, Shreveport, LA 71130-3932. The selection process will be completed by the end of March, 1998. Louisiana State University Medical Center-Shreveport is an Affirmative Action Employer.

SYSTEMATIC ICHTHYOLOGIST

The James Ford Bell Museum of Natural History and the Department of Fisheries and Wildlife announce a tenure-track, Curatorial position in the area of systematic ichthyology at the **ASSISTANT PROFESSOR** level. Candidates should have an active, specimen-based research program emphasizing an area such as molecular or morphological phylogenetics, historical biogeography, comparative biology, conservation, or other related topical areas. In addition to maintaining an innovative and extramurally funded research program, the successful candidate will be expected to teach minimally an ichthyology course annually, advise undergraduate and graduate students, curate the ichthyology and herpetology collections, and help maintain scientific content and accuracy in the Museum's public outreach programs. Tenure will reside in the Department of Fisheries and Wildlife. A Ph.D. is required and postdoctoral experience is preferred. Please send a curriculum vitae; up to five selected reprints; a statement of research, teaching, and curatorial interests; and names and addresses of three references postmarked by 16 January 1998 to: Search Committee, Bell Museum of Natural History, University of Minnesota, 10 Church Street S.E., Minneapolis, MN 55455-0104.

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

POSITIONS OPEN

MICROBIAL PHYSIOLOGIST, eukaryotic or prokaryotic. Tenure-track **ASSISTANT PROFESSOR** with broad background, to teach in content areas of microbial physiology, introductory microbiology, and advanced courses in area of specialization. The candidate should be qualified to rotate into biology major core curriculum courses, such as introductory biology, cellular biology, or genetics. Exact course assignments will depend on the candidate's qualifications and the needs of the department. The usual teaching load is two or three courses per semester (12 weighed teaching units). Preference will be given to individuals with interests and research experience in environmental and/or industrial microbiology. The successful candidate must develop a research program involving undergraduate and graduate M.A. students and must seek extramural funding for their research. Ph.D. required; teaching experience and recent research experience preferred. Appointment begins August, 1998. Request an official application and send curriculum vitae, transcripts, three letters of recommendation to: Dr. Tom Mallory, Chair, Department of Biology, California State University, Fresno, Fresno, CA 93740-8034. E-mail: tom_mallory@csufresno.edu; FAX: 209-278-3963; website: http://crasmus.biol.csufresno.edu. For fullest consideration, have complete application in by February 6, 1998. Equal Opportunity/Affirmative Action Employer.

BIOCHEMIST. The Department of Chemistry at the University of Nevada Las Vegas (UNLV) seeks a Ph.D. in biochemistry (or a closely related field) for an **ASSISTANT PROFESSOR**, tenure-track position. Postdoctoral experience is required. Duties include participation in undergraduate and graduate biochemistry course offerings and the establishment of an active research program that includes undergraduate participation. Salary will be commensurate with qualifications and experience. The position will start fall 1998 pending budgetary approval. The Department of Chemistry offers B.A., ACS-certified B.S., and M.S. degrees. Collaboration is possible with faculty in the Department of Biological Sciences, which offers the Ph.D. degree. Send an application letter, curriculum vitae, graduate transcripts, statements of teaching and research goals, and three reference letters to: Dr. Bryan L. Spangelo, Biochemistry Search Committee, Department of Chemistry, University of Nevada Las Vegas, 4505 Maryland Parkway, Las Vegas, NV 89154-4003. Application review will begin January 5, 1998, and the position will remain open until filled. Minorities, women, veterans, and the disabled are encouraged to apply. Affirmative Action/Equal Opportunity Employer. For more information, see the UNLV website: http://www.unlv.edu.

ASSISTANT OR ASSOCIATE PROFESSOR PHYSIOLOGY

The Department of Physiology at the University of Puerto Rico Medical School is seeking to fill two tenure-track positions at the Assistant or Associate Professor level. All areas of physiology from cell to organism will be considered. Qualifications include a Ph.D. or M.D. and postdoctoral experience. Individuals selected are expected to develop and maintain extramurally funded research programs. Teaching responsibilities require participation in the medical, dental, and graduate physiology courses. Salary range is \$43,000 to \$54,000 depending on rank. The University of Puerto Rico is a fully accredited medical school. Applicants must submit a letter of application, curriculum vitae, summary of current research, no more than three reprints, and the names of three references to: Dr. Nelson Escobales, Chair, Department of Physiology, University of Puerto Rico Medical School, P.O. Box 365067, San Juan, PR 00936-5067. E-mail: nescobal@prtc.net; Telephone: 787-753-0120. Review of applications will begin immediately and continue until the positions are filled. The University of Puerto Rico is an Equal Opportunity/Affirmative Action Employer.

Division of Cardiology seeks **ASSISTANT** or **ASSOCIATE PROFESSOR**. The successful candidate will have demonstrated expertise in molecular biology, and will join Dr. Bolli and other investigators to do research focusing on (i) changes in gene expression, (ii) gene therapy, and/or (iii) transgenic/gene targeting, as they pertain to myocardial ischemia. Applicants must hold M.D. or Ph.D., have three years of postdoctoral training, and be capable of establishing a strong independent research program. Send curriculum vitae, statement of interests, and three references to: R. Redinger, M.D., Chairman, Department of Medicine, University of Louisville, Louisville, KY 40292. Equal Employment Opportunity/Affirmative Action. PCN 09275.



Post Doctoral Fellowships Available in HIV Research

A DECADE OF RESEARCH EXCELLENCE AND COMMITMENT

The Henry M. Jackson Foundation for the Advancement of Military Medicine
and
The Walter Reed Army Institute of Research
offer opportunities to join our leaders in the battle against HIV

Multiple Post-Doctoral Positions are available with the U.S. Military HIV Research Program, a cooperative agreement between the Walter Reed Army Institute of Research and the Jackson Foundation for the Advancement of Military Medicine, at its laboratory facilities in Rockville, MD. This cutting-edge program conducts basic and applied HIV research with a strong emphasis on vaccine research and development, transmission, and pathogenesis.

Fellowship positions are available in the following areas of HIV research:

1) Animal Models; 2) Viral Immunology; 3) Cellular Immunology; 4) Molecular Biology; and 5) Virology. Successful candidates will work under the direction of world-class principal scientists and will have the opportunity to design, conduct, interpret, and evaluate experiments; prepare and present data at scientific meetings; and will participate in multi-institutional and international collaborations within the global scientific community.

Successful candidates must hold a Ph.D. or a M.D. with several years of laboratory experience, preferably with a strong emphasis on HIV-1 immunology and a strong interest in HIV vaccine development and research. Interested applicants should submit a CV with three letters of reference to:

Human
Resources
Department

- Animal Models - Attn: PL4970446
- Viral Immunology - Attn: PL4970453
- Cellular Immunology - Attn: PL4970234
- Molecular Biology - Attn: PL4970152
- Virology Position Attn: PL4970451



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1401 Rockville Pike • Suite 600 • Rockville, Maryland 20852 • E-mail: hr@mail.hjhf.org



**Manager, Monoclonal Antibody
Core Facility**

**Memorial Sloan-Kettering
Cancer Center**

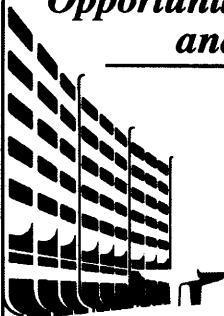
An outstanding individual is sought to supervise this Core Facility, which provides antibody production and purification services to Center personnel on milligram to gram scales. Responsibilities include the supervision of technical staff, and the continued development of a state-of-the-art facility providing antibodies for research and clinical purposes. A Ph.D. and/or M.D. degree, excellent organizational and communication skills, and experience in the generation of hybridomas are mandatory; experience in protein expression, purification, or modification are desirable.

Appointment will be at the rank of professional staff support, and includes a comprehensive package of benefits. Application packets (*curriculum vitae*, description of relevant experience, and three references) should be directed to: Dr. Howard T. Petrie, Memorial Sloan-Kettering Cancer Center, Box 341, 1275 York Avenue, New York, NY 10021. Applications close on 31 January 1998.

Memorial Sloan-Kettering is an Equal Opportunity/Affirmative Action Employer

Penn State College of Medicine

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The Faculty of the Penn State College of Medicine are recruiting highly-qualified candidates for funded positions in our programs of graduate education and postdoctoral research training. We offer diverse research opportunities designed to prepare trainees for productive, independent careers in basic or applied disciplines. Internationally recognized faculty, excellent facilities, and outstanding extramural research support comprise a superb training environment. Visit our site on the World Wide Web to obtain additional information or to submit an electronic application.

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Assistant Dean for Graduate Education, Penn State College of Medicine,
Hershey, PA 17033-0850, Telephone: (717) 531-8892
Fax: (717) 531-4582; E-mail: grad-hmc@psu.edu

PENNSTATE



College of Medicine
University Hospital • Children's Hospital
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Penn State is an affirmative action, equal opportunity university.

PALATIN
TECHNOLOGIES



Palatin Technologies, Inc., located in Edison, NJ, is a biopharmaceutical company devoted to developing and commercializing antibody and peptide-based products through the use of its enabling platform technologies. Palatin is seeking highly enthusiastic individuals to join our program on metallo-peptide based drug development.

1. Synthetic Organic/Peptide Chemists: Job responsibilities include design/synthesis of new molecular scaffolds for metal ion complexation, structure-based drug design, development and validation of solution, and solid phase synthetic methodologies to enable the production of metallo-peptides and their libraries. Candidates with M.S. and Ph.D. degrees with additional 2-3 years of experience in academic or industrial setting would be preferred. Multiple job openings at various levels commensurate with experience are available. (Job Code: CM/1-SS).

2. Molecular/Cell Biologist: We are seeking an innovative, highly motivated cell biologist to assume responsibility for design and implementation of molecular and cell-based assays utilizing modern technologies. The selected individual will be responsible for management of drug discovery and preclinical development projects, including supervision of research associates and coordination of activities with external collaborators. Demonstrated understanding of receptor-ligand analysis is highly desirable. Requirements of the position include a Ph.D. degree in cell/molecular biology, pharmacology, or a related field, and at least 2 years experience in drug discovery. (Job Code: MCB/1-CB).

Palatin Technologies offers competitive salaries and a comprehensive benefits package. Interested candidates should send a résumé and cover letter indicating job code to: **Palatin Technologies, Inc., 175 May Street, Suite 500, Edison, NJ 08837. Palatin is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

INSTRUCTOR, ASSISTANT, OR ASSOCIATE PROFESSOR DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOPHYSICS Virginia Commonwealth University \$36,500 to \$45,000

The Department is seeking applications for a non-tenure-track faculty position at the Instructor, Assistant, or Associate Professor level, depending on qualifications. Applicants must hold the Ph.D. degree and have had at least two years of postdoctoral experience. The successful candidate will have major teaching responsibilities and will be expected to either participate in a collaborative manner in one of the ongoing research areas of the department, or to conduct an independent research program.

Applicants should send a curriculum vitae, statement of research interests and future plans, and have three letters of recommendation sent, before March 1, 1998, to:

Chairman, Search Committee
Position No. F 0671
Department of Biochemistry and
Molecular Biophysics
P.O. Box 980614
Virginia Commonwealth University
Richmond, VA 23298-0614

Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disability are encouraged to apply.

BIOLOGY FACULTY POSITION ASSISTANT PROFESSOR

King's College, Wilkes-Barre, Pennsylvania, has an opening for an Assistant Professor of biology beginning with the fall, 1998 semester. This is an appointment which is annually renewable for up to a period of six years. The successful applicant will hold the Ph.D. in ecology or evolutionary biology and is expected to teach undergraduate biology courses for majors and non-majors, and to supervise an active undergraduate research program. Previous undergraduate teaching experience is desirable.

A letter of application, stating teaching and research interests, a curriculum vitae, academic transcripts, and three letters of professional reference should be submitted to: William A. Shergalis, Ph.D., Dean of the College of Arts and Sciences, King's College, Wilkes-Barre, PA 18711. The screening of applications will begin on February 16, 1998, and continue until the position is filled. King's College, sponsored by Congregation of Holy Cross, is an Equal Opportunity Employer.

Applicants are sought for a full-time, tenure-track position available July 1, 1998, at the ASSISTANT or ASSOCIATE PROFESSOR level in the Department of Oral Molecular Biology, School of Dentistry, Oregon Health Sciences University. The successful candidate will be expected to participate in the biochemistry teaching program to dental and dental hygiene students as well as bring a federally funded, independent research program. Requirements include a Ph.D. in biochemistry or closely related field. Send résumé and references to: Dr. Thomas R. Shearer, Oral Molecular Biology Search Committee, School of Dentistry, Oregon Health Sciences University, 611 S.W. Campus Drive, Portland, OR 97201. Oregon Health Sciences University is an Equal Opportunity/Affirmative Action Employer.

Trent University invites applications for a tenure-track position in plant or animal population ecology or plant systematics and evolution, to begin 1 July 1998. We are looking for applicants with a strong commitment to and interest in undergraduate teaching, combined with an active research program. Successful candidate will teach, at undergraduate level, courses in biogeography and/or conservation biology, as well as parts of courses in introductory biology. Full details can be obtained at website: <http://www.trentu.ca/biology>, or through: Erica Nol, Chair, Biology Department, Trent University, Peterborough, Ontario K9J 7B8 Canada. E-mail: enol@trentu.ca. Closing date for applications: 2 March 1998.

IS THIS YOUR ONCE IN A LIFETIME OPPORTUNITY

Small, established Los Angeles biotech company seeks creative RESEARCH DIRECTOR with entrepreneurial flair. Substantial equity position available for individual with marketable ideas. Please FAX curriculum vitae in absolute confidence to: FAX: 310-657-4222, Attn: Mr. Cole. All applicants will receive a reply.

POSITIONS OPEN

ASSISTANT PROFESSOR. The Biochemistry and Cellular and Molecular Biology Department at the University of Tennessee at Knoxville seeks a Geneticist studying problems in neurobiology. Opportunities for professional interaction include Geneticists and Neuroscientists in the department as well as at the University Hospital, the College of Veterinary Medicine, and the Life Sciences Division at Oak Ridge National Laboratory. Desired qualifications include 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 efforts at both the undergraduate and graduate level. For more information on the department visit the website: <http://utk-biogw.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: Bruce McKee, Ph.D., Chair of the Search Committee, Biochemistry and Cellular and Molecular Biology Department, WLS M407, University of Tennessee, Knoxville, TN 37996-0840. Review of applications will begin on February 15, 1998. University of Tennessee at Knoxville is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADEA Employer.

Faculty Positions. The Department of Pharmacology at the Temple University School of Medicine invites applications for tenured or tenure-track positions at the ASSOCIATE or FULL PROFESSOR level. Candidates must have a Ph.D., M.D., or equivalent degree, an interest in teaching medical and graduate students, a strong record of research productivity, demonstrated competitiveness for externally funded peer-reviewed grants, and a significant portion of their salary derived from external funding. Individuals with NIH-funded research in the area of actions of drugs of abuse in the brain, functions of endogenous receptor systems and their interactions with neuropeptide/cytokine systems in the brain are encouraged to apply. This is an exciting opportunity to interact with a multidisciplinary group of scientists. Send curriculum vitae, names of three references, and a concise statement of research interests to: Dr. Martin W. Adler, Chairperson, Search Committee, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. Temple University is an Affirmative Action/Equal Opportunity Employer and strongly encourages applications from women and minorities.

ANIMAL PHYSIOLOGIST CLARION UNIVERSITY OF PENNSYLVANIA

ASSISTANT PROFESSOR tenure-track position begins August 15, 1998. Ph.D. in a biological science required; postdoctoral experience desired. Commitment to excellence in teaching required. Teaching duties include animal physiology, biology of aging, general biology, and a course in candidate's expertise. External support for M.S./B.S. research and contribution to growing pre-professional program expected. Send cover letter, curriculum vitae, three recommendation letters, teaching philosophy/research interest statement, recent reprints, and unofficial transcripts to: Dr. Doug Smith, Department of Biology, Clarion University of Pennsylvania, Clarion, PA 16214. Telephone: 814-226-2561; e-mail: dsmith@mail.clarion.edu. Application review begins January 21, 1998. Clarion University is building a diverse academic community and encourages minorities, women, veterans, and persons with disability to apply. Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSOCIATE. USDA, Agricultural Research Service, Horticultural Crops Research Laboratory, Fresno, California, for a Research Associate (Chemical Engineer). Research will be part of a team effort directed toward development of techniques to trap and/or recycle methyl bromide on various substrates and the devising of mathematical models for a recovery process. Individual will be expected to develop an innovative independent research program, collaborate with other scientists, and publish research results in refereed journals and other media. Candidates must have a Ph.D. or equivalent in chemical engineering/chemistry and knowledge of chemical engineering, mathematical modeling, physical chemistry, and laboratory operations. Salary commensurate with experience, \$38,593 to \$45,024. Interested candidates send résumé to: Dr. J. G. Leesch, USDA/ARS/HCRL, 2021 South Peach Avenue, Fresno, CA 93727. Telephone: 209-453-3090 for further information. USDA/ARS is an Equal Opportunity Employer; women and minorities are encouraged to apply.

POSITIONS OPEN

WHITAKER EMINENT SCHOLAR IN SCIENCE FLORIDA GULF COAST UNIVERSITY College of Arts and Science

The Whitaker Foundation has generously endowed an Eminent Scholar position in science and provided a grant to be matched by state funds for building a Center for Science, Math, and Technology Education at Florida Gulf Coast University. The College of Arts and Sciences is seeking an eminent person in science or technology to direct and provide leadership for the planning, development, and implementation of this Center.

The sciences, math, environmental studies, and computer science will be under the aegis of the Center for Science, Math, and Technology Education. The Center's purpose is to build a model undergraduate program that will provide a first-rate education for students going on to research and professional careers, for those planning to be teachers, and for the professional development of current teachers in the schools. Emphasis will be on integrating the sciences; using technology to best advantage, especially for distance learning purposes; and providing hands-on experiences for students.

While Florida Gulf Coast University is not a research university, we emphasize undergraduate research experiences for our students. We encourage going outside traditional boundaries and support bringing new thinking to ways of improving the "doing" as well as the teaching of science. This Eminent Scholar position is an opportunity for a distinguished scientist to put into practice ideas for change that have been impossible in more established, traditional institutions.

The position reports to the Dean of the College of Arts and Sciences. Faculty rank and salary are commensurate with qualifications. The beginning date of August 1998 is negotiable. Appointment will be made on a 9- or 12-month, multi-year contractual basis. To apply, submit two copies of each of the following: letter of interest, curriculum vitae, and a list of five references. Official transcripts required if invited to interview (do not submit at this time). Mail to: Florida Gulf Coast University, Human Resources, Position #30151, 19501 Ben Hill Griffin Parkway, Ft. Myers, FL 33965-6565 postmarked by February 6, 1998. For additional information, visit our website: <http://www.fgcu.edu> or call the job-line at Telephone: 941-590-1111. Under Florida law, applications submitted are available for public review upon request.

Florida Gulf Coast University is an Equal Opportunity/Equal Access/Affirmative Action Institution which has a commitment to cultural, racial, and ethnic communities and encourages women and minorities to apply. It is expected that successful candidates share in this commitment.

ASSISTANT PROFESSOR MOLECULAR GENETIC MECHANISMS OF BIRTH DEFECTS

Applications are invited for a tenure-track appointment at the Assistant Professor level beginning September 1998. Candidates must have a Ph.D. and/or D.D.S. or the equivalent. The successful candidate will have at least two years of postdoctoral experience and an active research program focusing on molecular or molecular genetic mechanisms of normal and/or abnormal mammalian embryonic development and will be expected to develop an independent research program and successfully compete for external funding. Opportunities exist to collaborate with existing research programs in the Center for Birth Defects Research and a strong departmental program focusing on protein expression and trafficking. Applicants should send a curriculum vitae with list of publications, a description of research plans, and the names of three references to: Dr. William Young, Search Committee, Department of Biological and Biophysical Sciences, University of Louisville School of Dentistry, 501 South Preston Street, Louisville, KY 40292. The University of Louisville is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

RESEARCH ASSOCIATE/ RESEARCH ASSISTANT PROFESSOR

Ph.D., postdoctoral experience required. Will help to supervise a laboratory interested in the relationship of extracellular matrix to cell behavior. Expertise in protein expression systems desirable. Salary \$38,000 to \$45,000. Contact: Paula McKeown-Longo, Cell and Molecular IRG, A-134, Albany Medical College, Albany, NY 12208.

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WOMEN'S HOSPITAL

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ASSOCIATE, M.D./PH.D.**

Harvard Medical School

Circadian, Neuroendocrine and Sleep Disorders Section at Brigham and Women's Hospital located in Boston, MA is seeking a Research Associate (M.D. or Ph.D.) with a strong interest in the Space Life-Sciences and a background in sleep and circadian physiology. The candidate must be committed to the scientific and clinical aspects of sleep and circadian rhythms during space travel.

Please send statement of interest, full CV and names of 3 references to: Derk-Jan Dijk, Ph.D./Charles A. Czeisler, Ph.D., M.D., Division of Endocrinology, Department of Medicine, Harvard Medical School, Brigham and Women's Hospital, 221 Longwood Avenue, Boston, MA 02115. BWH/HMS EOE/AA. Minorities and women encouraged to apply.

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Immunologist/Vaccine Development

Merck Research Laboratories in West Point, Pennsylvania, a world leader in biological and pharmaceutical research, has an immediate opening for a Senior Research Immunologist in the department of Developmental Human Vaccine Serology.

The successful candidate will report to the Director of Developmental Human Vaccine Serology, which is responsible for all aspects of serological assays and data generated during clinical trials in support of vaccine development. In addition to developing, validating and conducting validated serological assays in a regulated (GMP/GLP) laboratory, the successful candidate will assume responsibility for establishment and management of many collaborations with external laboratories as well as for assay development and data management activities related to these collaborations.

A Ph.D. degree or equivalent in Immunochemistry, Immunology, or related field with experience in solving analytical problems, immunological or serological assays, and immunochemical techniques are required. Excellent salary and benefit programs accompany this position at our modern research facilities located 25 miles northwest of Philadelphia.

Please send *curriculum vitae* with cover letter and the names of three references to: **Ad B-134, MRL Human Resources, WP42-2, Merck Research Laboratories, P. O. Box 4, West Point, PA 19486.** Only candidates considered for interviews will receive responses. EOE, M/F/D/V.

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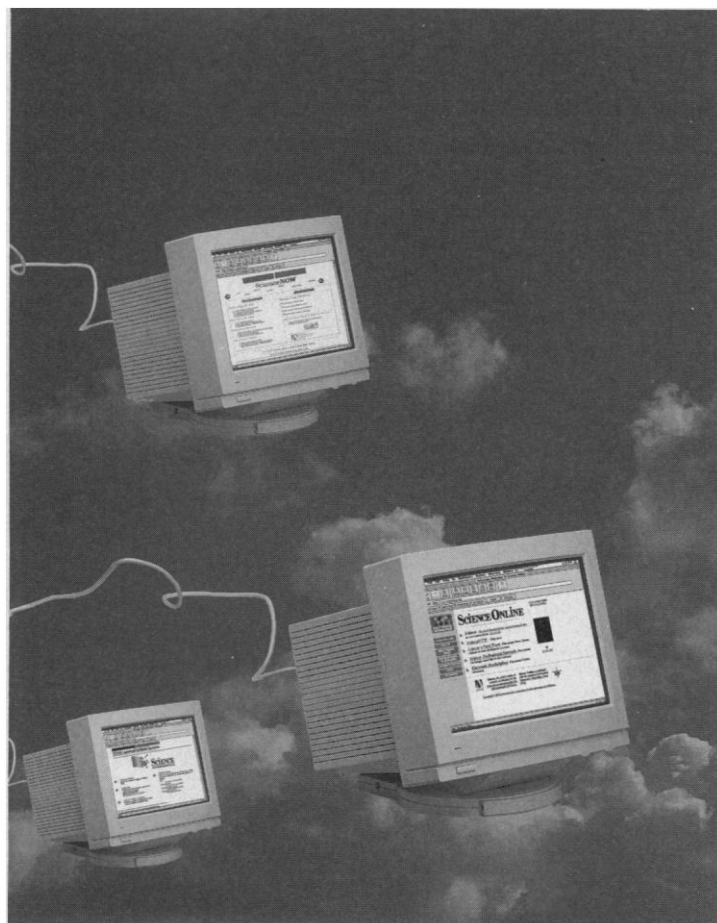
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POSITIONS OPEN

DIRECTOR SPACE STUDIES BOARD

The National Research Council is seeking a Director for its Space Studies Board. Duties include directing, supervising, planning, coordinating, and directing work; managing board finances. Requires a Ph.D. or equivalent in a scientific/technical related field, at least eight years of increasingly responsible experience related to space science and/or policy, broad knowledge of and familiarity with national space policy issues, ability to conceptualize and implement new initiatives, and experience managing technical or policy staff. We offer a salary commensurate with experience and an exceptional benefits package. Please send résumé and salary history in confidence to: **NRC/SSB Director, NAS 285/NM, 2101 Constitution Avenue N.W., Washington, DC 20418.** Visit us at website: www.nas.edu. *Equal Opportunity Employer.*

MOLECULAR BIOLOGIST/PHYSIOLOGIST GS-0401-11/12 USDA-ARS NORTHERN CROP SCIENCE LABORATORY Fargo, North Dakota 58105-5677

A permanent, full-time position is available in the Sugarbeet and Potato Research Facility at the USDA-ARS Northern Crop Science Laboratory in Fargo, North Dakota for a Molecular Biologist/Physiologist. The incumbent is project leader for investigations into sucrose partitioning in sugarbeet and is expected to initiate a program investigating the synthesis, turnover, and transport of sucrose in sugarbeet. Biochemical and physiological techniques will be used to identify metabolic factors that limit sucrose accumulation in the sugarbeet root. In addition, the incumbent will oversee research in which the phenomenon of heterosis is examined using molecular marker techniques.

Information generated by this research will guide the future efforts aimed at increasing sucrose production using a combination of biotechnological and traditional plant breeding methods. The incumbent will work with a team of sugarbeet and potato geneticists, physiologists, and pathologists in improving the production of these crops in the United States. Excellent facilities are available to the successful candidate. Starting salary is at the GS11-12 grade (\$38,593.00 to \$46,354.00 plus benefits). Interested applicants should send a cover letter describing research interests, unofficial transcripts, and the names and telephone numbers of three references to:

**USDA-ARS, Human Resources Division
Western Operations Branch
Room 220
6305 Ivy Lane
Greenbelt, MD 20770-1435**

RESEARCH ASSOCIATE/ MICROBIAL IMMUNOLOGY

Research Scientist or Postdoctoral position open immediately investigating immunology of medical fungi (*J. Immunol.* **154**:753, 1995; *J. Biol. Chem.* **270**:30725, 1995; *Trends Microbiol.* **4**:246, 1996; *ASM News* **63**:140, 1997). Murine model studies will define cellular and molecular mechanisms of antigen-mediated protective immunity to a pathogenic fungus *Blastomyces dermatitidis* and harness them with genetic vaccines. Position requires background and experience in immunology and either cell or molecular biology. Successful candidate must be a skilled worker who is highly motivated, goal-oriented, and able to work well in a group. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Bruce Klein, University of Wisconsin, 600 Highland Avenue, Room K4/434, Madison, WI 53792. FAX: 608-263-0440; e-mail: brkcln@vms2.macc.wisc.edu.**

POSTDOCTORAL POSITIONS. UCLA. T-cell activation: Role of MAP kinase cascades in T-cell decision making: apoptosis vs. anergy vs. growth. *Must be a U.S. citizen or permanent resident.* Please send curriculum vitae, statement of research interests, names and telephone numbers of three references to: **Dr. André Nel, M.D., Ph.D., Department of Medicine, UCLA School of Medicine, 52-175 CHS, 10833 Le Conte Avenue, Los Angeles, CA 90095-1680. FAX: 310-206-8107; e-mail: anel@med1.medsch.ucla.edu.** *Equal Opportunity Employer.*

POSITIONS OPEN



USDA, Agricultural Research Service, Midwest Area, National Animal Disease Center (NADC), Ames, Iowa, is seeking a **VETERINARY MEDICAL OFFICER** to serve as the **CENTER DIRECTOR**. Successful completion of a full course of study leading to a degree of Doctor of Veterinary Medicine is required. A Ph.D. degree in an appropriate discipline with documentation of research leadership is highly desirable. The mission of NADC is to conduct basic research on animal diseases of economic importance to U.S. agriculture in order to develop national animal disease prevention and control programs. Candidates should have professional knowledge of veterinary medicine and infectious disease research as related to animal disease research. Salary is commensurate with experience (\$97,000 to \$115,700). For information on the research programs and/or position, contact: **Dr. Richard Dunkle, Telephone: 309-681-2004.** For information on application procedures/forms, contact: **Gwen Donovan, Telephone: 301-344-4303.** Applications must be received by February 9, 1998.

USDA/ARS is an Equal Opportunity Employer.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY RESEARCH BIOLOGISTS (TWO)

The Reproductive Toxicology Division of the National Health and Environmental Effects Research Laboratory, United States Environmental Protection Agency, carries out research in support of assessment of human risk for adverse reproductive and developmental effects of environmental exposures. To enhance our research in the area of mechanism-based dose response models, we anticipate opening two Research Biologist positions: (1) Membrane signal transduction/second messengers, with expertise in regulation of reproductive function (e.g., neuroendocrine regulation of gonadal function, gamete function and/or development). Candidates would be expected to develop a research program evaluating possible target sites for reproductive toxicants and their mechanism(s) of action whereby they may alter membrane function. The goal is to develop predictive dose-response models for application to human risk assessment. (2) Embryonal pattern formation, with expertise in cellular and molecular approaches to elucidate mechanisms underlying normal development and toxicant-induced alteration of embryonal pattern formation (e.g., gastrulation, segmentation, somitogenesis, segment identity, limb development). Interest in human birth defects and experience in examining embryonal gene expression during organogenesis are highly desirable. Laboratory space, support services, and start-up funds are excellent for these permanent, full-time positions. A Ph.D. in a related field and postdoctoral experience are preferred, and *U.S. citizenship is required.* Please send a curriculum vitae and a letter indicating which position you are interested in and describing your research interests and career goals to:

**Dr. Robert Kavlock,
Reproductive Toxicology Division (MD-71)
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711**

The U.S. Environmental Protection Agency is an Equal Opportunity Employer.

MICROSCOPIST. The University of Georgia invites applications for a **LABORATORY COORDINATOR** of the Center for Ultrastructural Research. Applicants should have abilities with SEM, Confocal, TEM, fluorescence microscopy, and related techniques. An M.S. in the biological or physical sciences and at least three years of experience is desired. Applicants should submit a letter of interest, a résumé, and names of three references to: **Mark Farmer, Center for Ultrastructural Research, 151 Barrow Hall, University of Georgia, Athens, GA 30602. E-mail: kundell@emlab.cb.uga.edu.** Applications received before December 31, 1997, will be given full consideration. *The University of Georgia is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study role of RNA folding events in mediating RNA catalysis. A background in mechanistic enzymology, spectroscopic methods, and molecular biology techniques is preferred. Send cover letter, curriculum vitae, and names of three references to: **Dr. Philip C. Bevilacqua, Department of Chemistry, The Pennsylvania State University, University Park, PA 16802. FAX: 814-863-8403; e-mail: pcb@chem.psu.edu.**

POSITIONS OPEN

FOOD SAFETY MICROBIOLOGIST. The Department of Food Science and Nutrition, University of Minnesota, seeks a Food Safety Microbiologist for a 12-month, tenure-track position as **ASSISTANT PROFESSOR.** See website: <http://fscn.che.umn.edu>. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

MOLECULAR EPIDEMIOLOGIST SAN ANTONIO CANCER INSTITUTE (SACI) The University of Texas Health Science Center at San Antonio (UTHSCSA)

The UTHSCSA, a partner in the SACI, a National Cancer Institute-designated Comprehensive Cancer Center, has an immediate opening for a Molecular Epidemiologist. The position will include a tenure-track appointment in the Division of Hematology-Oncology/Immunology of the Department of Pediatrics at the UTHSCSA. Three years of salary and start-up funds are available. The qualified applicant will have a Ph.D. in molecular biology (or equivalent discipline) and/or epidemiology as well as demonstrated interest and experience in the study of prevalence and penetrance of cancer susceptibility genes or interactions between genes and environmental factors in cancer etiology. Interest in problems relevant to both pediatric and adult malignancies and/or minority populations is highly desirable.

SACI and the UTHSCSA emphasize opportunities for collaborative research by supporting a multidisciplinary cancer research program and a highly cooperative scientific environment. The successful applicant will be one with a similar approach to scientific investigation. Further information about the UTHSCSA and SACI is available at website: www.uthscsa.edu.

Interested applicants should send a curriculum vitae, a brief personal statement describing research accomplishments and goals, and the names of at least three references to:

**Anthony J. Infante, M.D., Ph.D.
Chair, Molecular Epidemiology
Search Committee
UTHSCSA, Department of Pediatrics
7703 Floyd Curl Drive
San Antonio, TX 78284-7810**

The UTHSCSA is an Affirmative Action/Equal Opportunity Employer.

SCIENCE SPECIALIST APPOINTMENTS WITH NBIF

Applicants with a strong interest in bioinformatics and experience in either plant biochemistry, especially secondary pathways, or cell and molecular biology are sought immediately. Six appointments of Science Specialists are available at the National Biotechnology Information Facility (NBIF) (website: <http://www.nbif.org>). M.S. with six years of experience in either a life science or computational science or related field, Ph.D. strongly preferred. Responsibilities include design, development, population, and curation of biological science databases; in particular, a database of plant specific and secondary metabolism pathways; develop and conduct workshops on bioinformatics; design and publish interactive teaching tools on the web; molecular modeling; and modeling flux through metabolic pathways. Questions should be directed to: **Dr. Greg Phillips (e-mail: grphilli@nmsu.edu or Dr. Mary O'Connell (e-mail: moconnell@nmsu.edu; Telephone: 505-646-5172).**

Submit application (curriculum vitae, statement of interest, names of three references, copies of transcripts) to: **NBIF Search/Department of Agronomy and Horticulture, Box 30003/MSC 3Q, New Mexico State University, Las Cruces, NM 88003.** Application deadline: December 15, 1997, or until all positions are filled. *New Mexico State University is an Equal Employment Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE. Patch clamp/aging. Available April 1 to study electrophysiology of aging in cultured neurons in the lab of **M. S. Evans.** Supported by an NIH grant to **G. J. Brewer.** A Ph.D. or M.D. and some experience in electrophysiology is required (website: www.siumed.edu/neuro/). Send curriculum vitae, three references, and description of past research to: **Dr. M. S. Evans, Department of Neurology, Southern Illinois University School of Medicine, Box 19230, Springfield, IL 62794-1316. FAX: 217-524-4539; e-mail: sevans@neuro.siumed.edu.** *Southern Illinois University is an Affirmative Action/Equal Opportunity Employer.*



THE WINERY OF
Ernest & Julio Gallo.

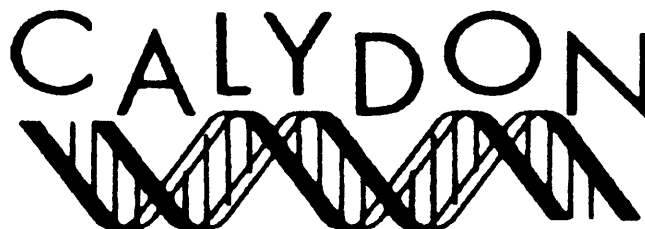
**POSTDOCTORAL
RESEARCH ASSOCIATE**

Ernest & Julio Gallo Winery Research Department is seeking a Postdoctoral Research Associate to work on a challenging research project in our Genetic Research Group.

The successful candidate will be responsible for isolating and characterizing fungal resistance genes, while participating in current group research projects focused on grape fungal diseases. The position requires a Ph.D. and at least two years prior experience in cDNA and differential gene expression technologies.

The closing date for applications is January 12th, 1998. Qualified candidates should send resume:

E & J Gallo Winery
H/R Development - Research Assoc.
600 Yosemite Blvd.
Modesto, CA 95354
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CALYDON, a new company located in Menlo Park, CA, is a rapidly growing biopharmaceutical company developing tissue-specific attenuated replication competent adenoviruses (ARCA™) for *in vivo* cancer therapy. We have several positions open:

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Ph.D., M.S., B.S.
Viral Immunologists

Molecular Biologists, with virology backgrounds, for research, product development, and Adenovirus GMP manufacturing.

Ph.D., M.S., B.S.
Molecular Biologists

We are also looking for a senior-level Director of Development and Manufacturing.

Ph.D.
Director, Development and Manufacturing

Our candidates are highly motivated individuals who wish to make a significant contribution to cancer therapy.

CALYDON offers an exciting research opportunity, an exciting corporate opportunity, and competitive salaries, stock options, and benefits. Send your CV to:

CALYDON, 1014 Hamilton Court
Menlo Park, CA 94025



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POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP/ RESEARCH ASSOCIATE

Opening(s) available for individual(s) to work on projects related to interactions between osteoblasts and hematopoietic cells. Minimal requirements include a Ph.D. in biochemistry, developmental biology, or a closely related discipline. Additional requirements include substantial experience in molecular biology and biochemistry, including expression, cloning, and protein purification. Level of appointment will be made depending upon qualifications of the individuals selected.

Interested candidates should send their curriculum vitae along with names and contact information for three references to:

Stephen G. Emerson, M.D., Ph.D.
Chief, Division of Hematology/Oncology
University of Pennsylvania School of Medicine
Maloney 510

3600 Spruce Street
Philadelphia, PA 19104

E-mail: emersons@mail.med.upenn.edu

University of Pennsylvania is an Equal Opportunity Employer, and applications from qualified underrepresented minorities are encouraged.

POSTDOCTORAL POSITION AVAILABLE FUNCTION OF MOLECULAR CHAPERONES LABORATORY OF CELL BIOLOGY, NHLBI Evan Eisenberg, M.D., Ph.D.

A Postdoctoral position is available to study the functions of the Hsp70 class of molecular chaperones. The Hsp70s, in association with various protein cofactors, use ATP hydrolysis to fold proteins, form and dissociate protein complexes, and translocate proteins across membranes. We are using site-directed mutagenesis, cell transfection, and reconstitution of cell-free systems to study the mechanism of action of the Hsp70s and their cofactor proteins in endocytosis, steroid receptor function, and protein folding.

Please submit a curriculum vitae, bibliography, and three letters of reference to:

Evan Eisenberg, M.D., Ph.D.
Laboratory of Cell Biology, NHLBI
Building 3, Room B1-22, MSC 0301
3 Center Drive
Bethesda, MD 20892-0301
FAX: 301-402-1519

The NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION

Postdoctoral projects with the University of Medicine and Dentistry of New Jersey (UMDNJ) are available in two areas of yeast molecular genetics: (1) the role of cAMP-dependent protein kinase in transcription regulation and growth, and (2) calcium channel regulation. Send curriculum vitae and have three letters of recommendation sent directly to: **Stephen Garrett, Ph.D., Department of Microbiology and Molecular Genetics, UMDNJ—New Jersey Medical School, MSBF-607, 185 South Orange Avenue, Newark, NJ 07103-2714. E-mail: garretst@umdnj.edu. Equal Opportunity Employer/Minorities/Females/Disabled/Veterans.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately to study regulatory mechanisms of neuropeptides in control of appetite and reproduction. The applicant should be experienced in molecular biology and neuroanatomical tracing techniques and have interest in *in vivo* experiments. Knowledge of tissue culture methodology is desirable. Send curriculum vitae and three references to: **Dr. Satya P. Kalra, Department of Neuroscience, University of Florida Brain Institute, College of Medicine, University of Florida College of Medicine, P.O. Box 100244, Gainesville, FL 32610-0244. The University of Florida is an Equal Opportunity/Affirmative Action Employer.**

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

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE POSITION USDA-ARS NORTHERN CROP SCIENCE LABORATORY Fargo, North Dakota 58105-5677

A two-year position is available at the USDA-ARS, Northern Crop Science Laboratory in Fargo, North Dakota to investigate the use of entomopathogenic fungi to control the sugarbeet root maggot (SBRM). The sugarbeet root maggot, *Tetanops myopaeformis*, is the most serious insect pest of sugarbeet in the northern Great Plains. The project aims to (a) collect, assay, and identify fungi that exhibit potential to control SBRM, (b) test candidate biocontrol fungi in the laboratory and in the field for efficacy against the SBRM, and (c) determine the survivability of the candidate biocontrol fungi. Improvement of the biocontrol agent through insect cycling or genetic engineering also may be pursued. Applicants should have strong background in microbiology and insect pathology. Qualifications include a Ph.D. in microbiology or related field. Starting salary is at the GS11-12 grade (\$38,593 to \$46,254 plus benefits). Outstanding facilities and equipment are available to the successful candidate. Interested applicants should send a cover letter describing research interests, curriculum vitae, unofficial academic transcripts, and the names and telephone numbers of three references to:

Dr. Garry A. Smith
Sugarbeet and Potato Research
USDA-ARS
Northern Crop Science Laboratory
Fargo, ND 58105-5677
E-mail: smithg@fargo.ars.usda.gov
Telephone: 701-239-1351
FAX: 701-239-1349

POSTDOCTORAL POSITIONS IN FULLERENE NANOTUBE TECHNOLOGY

Several new Postdoctoral Research positions are expected to become available at the new Carbon Nanotechnology Laboratory of the Center for Nanoscale Science and Technology at Rice University (website: <http://cnst.rice.edu>). The principal objective of the research will be to develop the fundamental science and applications of metallic fullerene nanotubes as true macromolecules, and to use these as seed crystals for extended growth. We are looking for applicants with backgrounds in one or more of the following areas: applied physics, electrical engineering, materials science, condensed matter physics, and/or physical chemistry. A letter of interest, curriculum vitae, and three letters of reference should be sent to: **Professor R. E. Smalley, Center for Nanoscale Science and Technology, MS-100, Rice University, P.O. Box 1892, Houston, TX 77251. Decisions to fill these positions will be made by February, 1998. Rice University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available to study transcription elongation in HIV-1 promoter. Strong background in molecular biology or biochemistry is required. Prior experience in at least two of the following is required: protein-nucleic acid interaction, protein purification, protein-protein interaction, *in vitro* transcription, protein modification. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. Tariq M. Rana, Department of Pharmacology, Robert Wood Johnson (Rutgers) Medical School, 675 Hoes Lane, Piscataway, NJ 08854. E-mail: rana@umdnj.edu.**

POSTDOCTORAL POSITION to study neurotransmitter regulation of salivary exocrine cell biology. Research areas include mechanisms controlling receptor expression/function and regulation of cell-specific differentiation/gene expression. Experience with cell culture, molecular techniques, and viral expression vectors preferred. Send curriculum vitae and three letters of recommendation to: **Dr. David Culp, Center for Oral Biology, Rochester Institute of Biomedical Sciences, University of Rochester Medical Center, Box 611, Rochester, NY 14642. E-mail: david_culp@urmc.rochester.edu.**

POSTDOCTORAL ASSOCIATE position available at the Fox Chase Cancer Center, one of only four independent Comprehensive Cancer Centers designated by the National Cancer Institute. Background in molecular and cell biology required. Please send curriculum vitae and names and addresses of three references to: **Harold Frucht, M.D., c/o Human Resources Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL FELLOW HUMAN GENE THERAPY RESEARCH INSTITUTE

The Human Gene Therapy Research Institute (HGTRI) has available Postdoctoral positions for research in gene transfer systems and their application to the treatment and prevention of human disease.

Laboratory focus is on translational research with a long-term goal of improving gene transfer into humans. Backgrounds in molecular virology, cancer biology, immunology, and microbiology are preferred, but all candidates with evidence of skills in molecular biology, cell biology, and mammalian biology will be considered. Positions are available immediately.

HGTRI is a not-for-profit, academic research group funded by the Central Iowa Health System of Des Moines. Laboratories provide state-of-the-art equipment, animal facility, and administrative and technical support. Applicants should submit a curriculum vitae, an outline of current and future research interests, and three references to: **Charles J. Link Jr., M.D., Director Gene Therapy Program, Iowa Health System, 1313 High Street, Suite 111, Des Moines, IA 50309. Equal Opportunity Employer/Affirmative Action/Minorities/Females/Disabled/Veterans.**

POSTDOCTORAL POSITIONS IN GENETIC EPIDEMIOLOGY

Southwest Foundation for Biomedical Research

Postdoctoral positions are available immediately to work with an active group of scientists in our Population Genetics Laboratory in research on the genetics of complex diseases. Projects involve statistical detection and mapping of genes that influence complex traits related to heart disease, diabetes, obesity, and other common human diseases. Opportunity to become involved with research in a variety of human populations or in animal models for human diseases. A Ph.D. or M.D. degree is required. Preference given to individuals with a background in genetics, statistics, or epidemiology. For further information, check the Population Genetics Laboratory website: <http://www.sfbf.org>. Send curriculum vitae, a letter describing your research interests, and the names, addresses, and telephone numbers of three references to: **Director of Human Resources (759), Southwest Foundation for Biomedical Research, P.O. Box 760549, San Antonio, TX 78245-0549. Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH FELLOWSHIP available in the Departments of Medicine and Cell and Developmental Biology, Oregon Health Sciences University, Portland, Oregon. Participate in studies of signaling and transcriptional regulation by stress in the mammalian kidney (PNAS 93:11242, 1996; JBC 271:12903, 1996; JCI 97:1884, 1996). Experience in cell culture and basic techniques of molecular biology essential; experience in eukaryotic transcriptional regulation and/or protein chemistry desirable. Please send curriculum vitae and names of three references to: **Dr. David Cohen, Nephrology, PP262, Oregon Health Sciences University, 3314 S.W. U.S. Veterans Hospital Road, Portland, OR 97201. E-mail: cohend@ohsu.edu.**

POSTDOCTORAL POSITION available immediately to study the function of a newly identified "Membrane-associated Guanylate Kinase" that contains multiple P1DZ domains (J. Biol. Chem. 272:31589-31597). Applicants should have a Ph.D. in biochemistry, cell biology, molecular biology, or related discipline. Send a curriculum vitae, description of research experience, and the names and addresses of three references to: **Dr. Guy L. James, Department of Biochemistry, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284-7760. E-mail: jamesg@uthscsa.edu. The University of Texas Health Science Center, San Antonio is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIPS HARVARD MEDICAL SCHOOL

Positions available immediately to study biochemical and cellular regulation of nitric oxide synthases in endothelial cells and cardiac myocytes. Applicant must have strong background in protein chemistry, cell signaling, and basic molecular biology. Submit curriculum vitae, research interests, and names of three references to: **Thomas Michel, Ph.D., M.D., Brigham and Women's Hospital, Harvard Medical School, 75 Francis Street, Boston, MA 02115. FAX: 617-732-5132; e-mail: michel@calvin.bwh.harvard.edu.**

EUROPEAN CAREER OPPORTUNITIES

KING'S COLLEGE RESEARCH CENTRE KING'S COLLEGE CAMBRIDGE

THREE RESEARCH FELLOWSHIPS IN SPATIALLY-EXTENDED DYNAMICS

Applications are invited from mathematicians and other suitably qualified candidates for Research Fellowships in each of the following three areas:

Dynamical Systems

Stochastic Processes and Data Analysis

Mathematical Modeling of Biological Systems

to work in an interdisciplinary project on spatially-extended dynamics, funded by King's College Research Centre. The project will explore the interface between dynamical systems, stochastic processes, and mathematical modeling of biological systems. The successful candidates will be expected to work collaboratively on the project as well as producing their own individual work. There will be provision for interdisciplinary seminars and for invited senior researchers to visit the project for short periods. The Research Fellows will work in the King's College Research Centre with opportunities to collaborate with research groups in the University's mathematics and biology departments. The Fellowships may be filled at the Junior or Senior level, depending on age and experience.

Stipends range from £12,885 to £16,465 for a Junior Research Fellow and from £18,402 to £23,370 for a Senior Research Fellow with limited allowances for travel and research expenses. Elections will take place in February 1998 and the Fellowships will commence on 1 October 1998. The tenure is four years.

Intending applicants should obtain further information from <http://www.kings.cam.ac.uk/> or from the Convener, Research Centre, King's College, Cambridge CB2 1ST.

Applications comprising a curriculum vitae, a list of publications and the names of three referees familiar with the candidate's work should be sent to the Convener not later than 14 January 1998. Candidates should include the names and addresses of three referees who have agreed in advance to write to the Convener. These letters should also reach the Convener not later than 14 January 1998.

The College follows an Equal Opportunity policy.

GLOBAL CAREER OPPORTUNITIES

the university of the
west indies
st. augustine, trinidad

Medical Sciences



Senior Lecturer/Lecturer in Human Anatomy with PhD in Anatomy or MD or equivalent

ANNUAL SALARY RANGES (under review): Medical Senior Lecturer: TT\$137,520 - TT\$147,696; Lecturer: TT\$98,928 - TT\$109,104 (B) - TT\$117,744 - TT\$127,920. Plus an Institutional Allowance ranging from 15% of 20% of basic salary depending on post. Regional Allowances, Passages, Pension, Housing Allowance, Study, Travel and Book Grants. Detailed applications (two copies) giving full particulars of qualifications and experience, date of birth, nationality, marital status and the names and addresses of three referees, one of whom should be from your present organisation, should be sent as soon as possible to the Campus Registrar (Attn: Administrative Officer Appointments), The University of the West Indies, St Augustine, Trinidad, W.I. (fax: (1 868) 663 9684) from whom further particulars of the posts can be obtained. Further particulars are also available from the Association of Commonwealth Universities (46281), 36 Gordon Square, London WC1H 0PF, UK (tel. 0171 387 8572 ext. 206; fax 0171 813 3055; email appts@acu.ac.uk). In order to expedite the appointment procedures, applicants are advised to ask their referees to send references under **Confidential** cover direct to the Campus Registrar at the above address without waiting to be contacted by the University.

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Fax: 44 (0) 1223 576 208
E-mail: european_ads@science-int.co.uk

POSITIONS OPEN

POSTDOCTORAL POSITION MOLECULAR CARCINOGENESIS

Postdoctoral Fellowship is available to study the role of ornithine decarboxylase and polyamines in epithelial tumorigenesis and invasion. These studies will incorporate molecular, cellular, and transgenic approaches to evaluate the *in vivo* interaction between polyamines and possible downstream effectors such as casein kinase 2 (JBC 272:12536; Cancer Res. 57:2104). Strong background in molecular biology required. Experience in protein purification desirable. The Lankenau Medical Research Center is a member of the Jefferson Health System located in suburban Philadelphia. Send curriculum vitae, a brief description of research experience, and the names of three references to: Susan K. Gilmour, Ph.D., The Lankenau Medical Research Center, 100 Lancaster Avenue, Wynnewood, PA 19096. FAX: 610-645-2205. An Equal Opportunity Employer.

POSTDOCTORAL RESEARCHER *Helicobacter pylori*

Molecular Microbiologist wanted to study host and bacterial virulence factors of *H. pylori*. Investigate *in vitro* mechanisms of pathogenesis and apply them directly to relevant animal models. Ph.D. in molecular genetics, microbiology, or related field, and proficiency in molecular genetic methods required. Send curriculum vitae, statement of professional goals, and three professional references to: Kathryn A. Eaton, D.V.M., Ph.D., Department of Veterinary Biosciences, Ohio State University, 1925 Coffey Road, Columbus, OH 43120. E-mail: eaton.1@osu.edu. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Immediately available to elucidate molecular controls that govern activity of the EKLF erythroid cell-specific transcription factor. (EMBO J. 15:5888, 1996; Blood 90:1291, 1997). Expertise in molecular biology, murine embryology, and cell culture are desirable. Please send curriculum vitae, a brief summary of research experience, and three reference letters to: Dr. James J. Bieker, Brookdale Center for Molecular Biology, The Mount Sinai School of Medicine, Box 1126, One Gustave L. Levy Place, New York, NY 10029-6574. FAX: 212-860-9279; e-mail: jbieker@smtpink.mssm.edu. We are an Equal Opportunity Employer fostering diversity in the workplace.

POSTDOCTORAL POSITION available immediately to study adhesion receptor structure and function and the role of receptor-mediated adhesion and signaling on the biology of vascular cells. Applicants will have significant experience in biochemistry, cellular and molecular biology, and the analysis of gene expression. Experience with transgenic mice and ES cell methods is highly desirable. Send curriculum vitae and the names and addresses of three references to: Joseph C. Loftus, Ph.D., Department of Biochemistry and Molecular Biology, Mayo Clinic Scottsdale, 13400 East Shea Boulevard, Scottsdale, AZ 85259. Mayo Clinic Scottsdale is an Affirmative Action Employer and Educator.

DANA FARBER CANCER INSTITUTE HARVARD MEDICAL SCHOOL

A POSTDOCTORAL POSITION is available to study the molecular basis of genomic instability in a human cancer susceptibility syndrome, Fanconi Anemia (D'Andrea, A. D., Nature Genetics 14:240-242, 1996; Kupfer et al., Nature Genetics 17, Dec 1997). A background in cell biology, molecular biology, and DNA repair enzymology is preferred. Send curriculum vitae and the names of three references to: Dr. Alan D'Andrea, Dana Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. E-mail: a_dandrea@farber.harvard.edu.

POSTDOCTORAL RESEARCH POSITION. To study the role of protein kinases and phosphoproteins in neutrophil chemotactic activation. A background in biochemistry, molecular biology, or immunology is required. Send curriculum vitae and the names of referees to: Dr. Chi-Kuang Huang, Department of Pathology, University of Connecticut Health Center, Farmington, CT 06030.

An Affirmative Action/Equal Opportunity Employer. Minorities/Females/Persons with Disability/Veterans.

POSITIONS OPEN



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

POSTDOCTORAL POSITIONS HENRY M. JACKSON FOUNDATION BETHESDA, MARYLAND, USA

Applications are invited for two Postdoctoral positions in the area of bioremediation of waste sites containing both organic toxins (e.g., toluene/TCE/PCB) and radionuclides/heavy metals, using radiation-resistant bacteria. Appointments will be for three years and salary commensurate with experience. The work will be conducted in Bethesda, Maryland in the laboratory of Dr. Michael Daly (P.I.) and Kenneth Minton (Co-P.I.), whose specialty is the genetics of the radiation-resistant bacterium *Deinococcus radiodurans*. Highly motivated and creative individuals are sought for this interdisciplinary project. Positions address (1) constructing organic toxin-degrading *D. radiodurans* strains using cloned catabolic pathways of *Pseudomonas*; (2) constructing metal-reducing/resistant *D. radiodurans* strains using cloned metal reduction/resistance bacterial pathways, thereby minimizing dissemination of radioactive and heavy metals from waste sites to groundwater. A curriculum vitae including a list of publications and a brief discussion of past research activities should be sent to the attention of: Dr. Michael J. Daly, Department of Pathology, Room B3153, F. E. Hebert School of Medicine, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799 USA. Telephone: 301-295-3750; FAX: 301-295-1640; e-mail: mdaly@usuh.sml. For more information contact Dr. Daly.

POSTDOCTORAL POSITION MOLECULAR NEUROSCIENCE

A three-year position with possibility of advancement is available to study glutamate neurotransmission in neuroendocrine regulation (see *Endocrine Rev.* 18:678-700, 1997). Research involves use of differential display analysis, suppression PCR, two hybrid screening, cell cultures, cell transfections, Northern analysis, Western analysis. Expertise in molecular biology required. Salary range \$25,000 to \$27,000. Send curriculum vitae and three letters of reference by February 1 to: Dr. Darrell W. Brann, Department of Physiology and Endocrinology, Medical College of Georgia, Augusta, GA 30912. Medical College of Georgia is an Equal Opportunity Employer. Women, minorities, and disabled are encouraged to apply.

POSTDOCTORAL POSITIONS DUKE UNIVERSITY

Bioorganic/nucleic acid chemistry/biochemistry. Initial one-year appointment. Recent Ph.D.'s for multidisciplinary research environment. Project (see *Hum. Mutat.* 7:346-354, 1996) involves surface derivatization and characterization, microfabrication (DNA "chips"), RNA analysis, molecular computation, and especially DNA synthesis. New laboratories in the Levine Science Research Center.

Curriculum vitae, publication list, and references (with contact information) to: Professor M. C. Pirrung, Department of Chemistry, Duke University, P.O. Box 90346, Durham, NC 27708-0346. FAX: 919-660-1591.

A POSTDOCTORAL POSITION is currently available to characterize gamma-glutamyl hydrolase (GH) gene and study the regulation of its expression in normal and tumor cells. Project focuses on the role of GH in cellular folate homeostasis and antifolate toxicity. Interested candidates with experience in cellular and molecular biology are encouraged to apply with three letters of reference to: Dr. John Galivan and Dr. Rong Yao, Health Research Inc., Wadsworth Center, New York State Department of Health, Empire State Plaza, Albany, NY 12201. Health Research Inc. is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE

Three-year position available immediately at Fox Chase Cancer Center, an NCI-designated Comprehensive Cancer Center, to study the tuberous sclerosis tumor suppressor genes. Strong background in molecular and cell biology required. Please send curriculum vitae and names of three references to: Dr. Elizabeth Henske, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. E-mail: ep_henske@fccc.edu. Equal Opportunity Employer.

POSITIONS OPEN

MEDICAL GLYCOBIOLOGY IN LA JOLLA

POSTDOCTORAL POSITION for accomplished, dedicated Ph.D. or M.D. to explore and define new carbohydrate-deficient glycoprotein syndromes (CDGS). Involves analysis of glycosylation, cloning novel sugar transporters, and development of transgenic mice model for effective human therapy. Track record of publications in one or more of these areas and/or glycobiology required. Send curriculum vitae and names of three references to: Hudson Freeze, The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037. Telephone: 619-646-3142. FAX: 619-646-3193; e-mail: hudson@ljcrf.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITIONS GENE REGULATION AND GROWTH CONTROL

Immediate openings for Ph.D.'s trained in molecular biology to study transcription control mechanisms during skeletal and cardiac myogenesis (1), pancreatic development (2), hematopoiesis (3), and oncogenesis (4). *In vitro* model systems as well as transgenic mouse and knockout technologies are being used. Send curriculum vitae and the names of three references to:

Dr. Stephen F. Konieczny (Projects 1 and 2)
Dr. Elizabeth J. Taparowsky (Projects 3 and 4)

Department of Biological Sciences
Purdue University
West Lafayette, IN 47907-1392

Purdue University is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH SCIENTIST. Position available in the Adirondack Mountains early 1998; requires a doctoral degree with productive experience in molecular and cell biology. The successful candidate will participate in functional domain analysis and gene regulation studies of visual cycle proteins and have the opportunity to use state-of-the-art protein chemistry methods including electrospray mass spectrometry. Send curriculum vitae and three letters of reference to: Dr. John W. Crabb, c/o Andrea Terwilliger, Personnel Manager, Adirondack Biomedical Research Institute, (formerly W. Alton Jones Cell Science Center), 10 Old Barn Road, Lake Placid, NY 12946. E-mail: jcrabb@northnet.org; FAX: 518-523-1849.

POSTDOCTORAL/RESEARCH ASSOCIATE positions available in (1) murine genome program for screening of autoimmune responsible genes, (2) knockout approaches, and (3) molecular and biochemical analysis of disk (spine) degeneration. Understanding and experience in the relevant area is absolute requirement. Applicants should send a curriculum vitae, a brief summary of research experience, and the names and addresses of the current preceptor and at least two additional referees to: Tibor T. Glant, M.D., Ph.D., Professor, Department of Orthopedic Surgery, Rush University at Rush-Presbyterian St. Luke's Medical Center, 1653 West Congress Parkway, Chicago, IL 60612.

POSTDOCTORAL POSITION is available to study transcriptional activation by the heat shock transcription factor, HSF1, in response to cellular stress. Project involves characterization of HSF1 coactivators using a defined *in vitro* system. Experience working with purified enzymes preferred. The Institute of Molecular Medicine and Genetics (IMMAG) offers a highly interactive environment with outstanding facilities. Send curriculum vitae to: Mark Anderson, Ph.D., IMMAG, Medical College of Georgia, Room CB-2803, Augusta, GA 30912. E-mail: manderson@immag.mcg.edu. MCG is an Equal Opportunity Employer. Women, minorities, and disabled are encouraged to apply.

POSTDOCTORAL POSITION available. Exciting research on (1) function of novel secreted forms of human IgE produced by alternative RNA splicing, and (2) molecular control of their production. Studies involve *in vivo* and *in vitro* biologic functions of the IgE isoforms and regulation of the alternative RNA splicing. Background in immunology important and biochemistry useful. Please send curriculum vitae, career goals, and names and addresses for three references to: Dr. Andrew Saxon, Division of CIA, UCLA Medical School, Los Angeles, CA 90095-1680. FAX: 310-206-8107; e-mail: asaxon@med1.medsch.ucla.edu.

**UNIVERSITY OF NEWCASTLE UPON TYNE
DEPARTMENT OF PHYSIOLOGICAL SCIENCES
TEMPORARY LECTURESHIP
Cellular and Molecular Physiology**

Applications are invited for a temporary lectureship to work in the Department of Physiological Sciences within an interdisciplinary Human Smooth Muscle Research Group. The post is supported by the Wellcome Trust and is to provide teaching and administrative replacement for **Dr. J. I. Gillespie** during tenure of a Wellcome Trust Research Leave Fellowship. You will be expected to undertake a full and active role in basic scientific research.

It is likely that the successful candidate will collaborate closely with Dr. Gillespie as part of a team of basic clinical scientists working on the physiology and pathophysiology of human smooth muscle. However, consideration will also be given to outstanding researchers working in any area of cellular and molecular physiology. Our aim is to appoint the best applicant, based on research excellence.

The post is tenable for three years and an appointment will be made as soon as possible. Salary will be at an appropriate point on the Lecturer Grade A salary scale: £16,045–£21,016 p.a., according to qualifications and experience.

Informal enquiries may be made to **Dr. J. I. Gillespie** (E-mail: j.i.gillespie@ncl.ac.uk, FAX: 0191 222 5213, or Tel: 0191 222 6988) or to **Professor M. J. Whitaker**, Head of Department, (E-mail: michael.whitaker@ncl.ac.uk, FAX: 0191 222 6706 or Telephone: 0191 222 6707) For further information, including how to apply, please telephone (0191) 222 5429 (24 hour answerphone) quoting reference A5128/S or write to: **Personnel Section, University of Newcastle, 1 Park Terrace, Newcastle upon Tyne NE1 7RU**. Closing date for applications: 5th January 1998.

Committed to Equal Opportunities.

**UNIVERSITY OF NEWCASTLE UPON TYNE
DEPARTMENT OF PHYSIOLOGICAL SCIENCES
LECTURESHIP (NON-CLINICAL)**

Applications are invited for the above lectureship in the Department of Physiological Sciences. The Department has strong research programs in cell biology (cell signalling calcium imaging and epithelial physiology) and sensory neuroscience and was rated 5 in the 1996 research selectivity exercise. Occupying modern, well equipped laboratories within the Medical School, the Department is responsible for teaching Honours Sciences courses in Physiological Sciences and is a major contributor to the integrated Medical and Dental Curricula. Candidates should have a strong track record in any area of modern biological research. The successful applicant will be expected to develop a strong group on appointment. In recognition of this, teaching commitments will be nominal in the first years of the appointment.

Salary will be at an appropriate point on either the Lecturer Grade A scale: £16,045–£21,016 or Lecturer Grade B scale: £21,894–£27,985 p.a., according to qualifications and experience. Prospective applicants who wish to discuss the appointment informally should contact: **Professor M. J. Whitaker, Physiological Sciences**, (Tel: 0191 222 6707, E-mail: michael.whitaker@ncl.ac.uk)

For further information, including how to apply, please telephone (0191) 222 5429 (24 hour answerphone) quoting reference A5135/S or write to: **Personnel Section, University of Newcastle, 1 Park Terrace, Newcastle upon Tyne NE1 7RU**. Closing date for applications: 5th January 1998.

Committed to Equal Opportunities.

GLOBAL CAREER OPPORTUNITIES

**Cooperative
Research
Centre
Molecular
Plant
Breeding**



The Cooperative Research Centre for Molecular Plant Breeding is seeking new staff trained in areas of plant molecular biology, breeding, genetics, physiology or biochemistry. The CRC commenced operation on 1st July, 1997. The CRC will develop, test and implement effective strategies for the use of molecular technologies into cereal and pasture grass breeding programs. These strategies will provide the research base, tools and training for the next generation of plant breeders. The CRC is a collaborative grouping of researchers from many organisations with total resources of about \$10 million per annum. The core participants are: University of Adelaide, Southern Cross University, The South Australian Research and Development Institute, Agriculture Victoria and CIMMYT in Mexico. Further information about the CRC is available from the Director, Dr Peter Langridge, Waite Campus, University of Adelaide, Glen Osmond SA 5064, Australia; Email plangridge@waite.adelaide.edu.au



**THE UNIVERSITY OF ADELAIDE
RESEARCH ASSOCIATE/
POSTDOCTORAL
FELLOW
(Ref: 3168S)**

**Department of Plant Science
Salary: A\$33,572 – A\$40,889***

SubProgram 1.5 Alternative Strategies for Engineering Disease Resistance
The overall objective of this subProgram is to evaluate the efficiency of a number of cloned genes in providing broad spectrum resistance to viral and microbial diseases in cereals and pasture grasses. Genes encoding pathogenesis-related proteins, and specific disease resistant genes, will be transformed into barley, wheat and ryegrass, and their effects on the development of disease symptoms will be assessed.

You should have:

- a PhD or equivalent degree in biochemistry, molecular biology or a related discipline
- experience in recombinant DNA technology, protein chemistry and enzymology, or cereal transformation/plant cell culture is highly desirable

*A minimum of A\$38,092 per annum is payable to the holder of a PhD.

The position is available on an annual basis from 1 January 1998, with the possibility of renewal up to three years. Further information regarding the position including the selection criteria may be obtained from Professor GB Fincher, telephone: (61-8) 8303 7296 or fax: (61-8) 8303 7109.

APPLICATIONS IN DUPLICATE addressing the selection criteria and quoting the reference number should include names and addresses of three referees, to the Head, Department of Plant Science, Waite Campus, University of Adelaide, Private Mail Bag 1, Glen Osmond, SA 5064 Australia, by **9 January 1998**.

TMPA94755



**FOUNDATION FOR
RESEARCH, SCIENCE AND TECHNOLOGY**

Tūāpapa Toha Pūtea, Whakatakoto Kaupapa Rangahau, Pūtaiao

POST-DOCTORAL FELLOWSHIPS

The NZ Science and Technology Post-Doctoral Fellowships Scheme provides early career support for New Zealand scientists, engineers and social scientists of outstanding talent, for post-doctoral research either locally or overseas. Applicants must be New Zealand citizens or permanent residents of New Zealand.

Fellowships will normally have a maximum value of NZ\$70,000 (incl. GST) per year, the stipend will on average be NZ\$44,444 (NZ\$50,000 incl. GST) with the balance available to cover the direct costs of the research. Fellowships tenable in overseas countries will have an overall value that reflects costs of working in that particular country.

Applications must be received by Friday, 20 March 1998, on the Foundation application form.

Foundation for Research, Science and Technology
PO Box 12-240 Wellington New Zealand
Phone: 64 4 499 2559 Fax: 64 4 499 2568
Email: pdfs@frst.govt.nz
Website: <http://www.frst.govt.nz>

POSITIONS OPEN

NATIONAL INSTITUTES OF HEALTH NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE Basic Neurosciences Program Synaptic Function and Formation Unit

Two **POSTDOCTORAL POSITIONS** (U.S. citizen, permanent resident, or non-U.S. citizen) are available immediately in the Synapse Formation and Function Unit of the National Institute of Neurological Disorders and Stroke (NINDS) Intramural program to study the physiology of early synaptic connections. Research in the laboratory focuses on the role of immature synaptic connections in shaping the spatiotemporal properties of spontaneous activity in the developing mammalian retina which is required for normal visual system development (see *Science* 272:1182-1187, 1996; *Neuron* 19:293-306, 1997). Candidates with experience in electrophysiology, imaging, or cell culture are strongly encouraged to apply. The initial appointment will be for two years with a salary range between \$27,500 and \$38,000. Please send a letter describing your research interest, a curriculum vitae, and three letters of reference to: Maria Feller. Current address is: Maria B. Feller, 221 Life Sciences Addition, Department of Molecular and Cell Biology, University of California, Berkeley, CA 94720-3200. Future address will be: NIH/NINDS, 36 Convent Drive, MSC-4152, Building 36, Room 5A13, Bethesda, MD 20892-4152. NIH is an Equal Opportunity Employer.

Synthetic chemistry and natural products purification. **POSTDOCTORAL POSITION.** The Laboratories of Barry Forman and John Termini at the City of Hope National Medical Center are seeking a Postdoctoral Fellow to identify ligands for orphan nuclear receptors. Applicants should have experience in natural products purification and synthetic chemistry as well as a desire to interact with molecular biologists. For more information please visit the Forman lab website: <http://home1.gte.net/bforman/LabPage/lab.htm>. Candidates with a Ph.D. should send a curriculum vitae and three letters of recommendation to: City of Hope National Medical Center, Human Resources, 1500 East Duarte Road, Duarte, CA 91010-3000. FAX: 626-301-8448; e-mail: cohappily@smtplink.coh.org.

POSTDOCTORAL/RESEARCH ASSOCIATES in cell and molecular biology of liver injury and fibrogenesis. To participate in studies on molecular mechanisms of cytokine/chemokine, metalloproteinase gene expression by hepatic non-parenchymal cells including the roles of cross-coupling of transcriptional factors (NF- κ B, AP-1, RAR, RXR). Self-motivated individuals with Ph.D. and training in cell biology, molecular biology, and/or biochemistry, are encouraged to apply. Send curriculum vitae to: Dr. H. Tsukamoto, Professor of Medicine and Pathology, University of Southern California, 2011 Zonal Avenue, HMR-101, Los Angeles, CA 90033. E-mail: htsukamo@hsc.usc.edu.

POSTDOCTORAL POSITIONS to study (1) Regulation and expression of dioxin-induced CYP enzymes. Requires molecular biology experience (cloning, Northern, transfection, EMSA, cell culture, protein purification). (2) Dioxin effects on membrane lipids. Experience in lipid analysis, phospholipases, or eicosanoid metabolism. Send curriculum vitae, names of three references, and statement of research interests to: Dr. Arleen Rifkin, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study molecular regulation of endothelial cell xanthine oxidase. Experience in molecular biology, biochemistry, and/or cell biology desirable. Application deadline is January 15, 1998.

Please send curriculum vitae to: Dr. Paul Hassoun, Associate Professor, New England Medical Center, 750 Washington Street, Boston, MA 02111. E-mail: paul.hassoun@es.nemc.org; Telephone: 617-636-6386; FAX: 617-636-5953.

POSTDOCTORAL POSITIONS available for studies of leukocyte eicosanoid formation and cosinophil trafficking and function. Please send curriculum vitae and three references to: Dr. Peter F. Weller, Beth Israel Deaconess Medical Center/Harvard Medical School, 300 Brookline Avenue, Boston, MA 02215. FAX: 617-277-6061. Equal Opportunity Employer/Affirmative Action.

POSITIONS OPEN

TWO POSTDOCTORAL POSITIONS

Circadian clocks and photoreceptor cell biology. Recent technical advances (transgenic *Xenopus* and differential display screening strategies) make it possible to advance our molecular understanding of the photoreceptor circadian clock and development of cell polarity and membrane turnover in photoreceptors. Two Postdoctoral positions are available to study (1) the cell biology of photoreceptor membrane turnover or (2) cellular/molecular aspects of the photoreceptor circadian clock. The first position emphasizes photoreceptor membrane turnover and the role of membrane-cytoskeleton interaction. The second is directed at identification vertebrate "clock genes" and analysis of their role in the photoreceptor clock. Both positions require application of biochemical, molecular, and cell biological approaches using retinas from *Xenopus laevis*. For both projects the laboratory is employing newly introduced transgenic techniques in *Xenopus* that permit specific targeting to photoreceptors. Send or FAX résumé and references to: Dr. Joseph C. Besharse, Chairman, Department of Cellular Biology 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. Equal Opportunity Employer/Affirmative Action/Minority/Female/Disabled/Veterans.

MASSACHUSETTS GENERAL HOSPITAL HARVARD MEDICAL SCHOOL POSTDOCTORAL RESEARCH FELLOWSHIPS

Applications are invited from individuals with interests in skeletal development and cartilage regulation.

(1) Candidates for this position should have a Ph.D. in molecular/cell biology or an M.D. with significant research experience in molecular/cell biology.

(2) Candidates for this position should have a Ph.D. in biomechanics or mechanical engineering and, preferably, experience in analysis of cartilage or bone.

Research projects focus on growth factor and biomechanical signaling mechanisms in the regulation of growth plate and articular cartilage. Please send curriculum vitae and names of three references to: Dr. Stephen B. Trippel, Department of Orthopaedics, Research Laboratories, Jackson 11th Floor, Massachusetts General Hospital, Boston, MA 02114.

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION GROWTH FACTOR SIGNAL TRANSDUCTION

Postdoctoral Research Fellow/Scientist positions available January 1998, studying the mechanisms of PDGF-stimulated transcription of immediate-early genes (see *MCB* 12:5288; *MCB* 15:315; *JBC* 271:17417). Projects involve gene cloning, DNA transfections, and RNA purification/quantitation. Candidates should have a Ph.D. and/or M.D. and a strong background in molecular and cellular biology. Send curriculum vitae, summary of research experience, and names and telephone numbers of three references to: Rolf Freter, M.D., Ph.D., Columbia University, P&S Room 10-432, 630 West 168th Street, New York, NY 10032.

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available to study the role of transient states in modulation ligand binding to DNA. Project involves time-resolved measurements of the unwinding kinetics of DNA chains following a laser-induced temperature jump.

Please send résumé and three letters of reference by March 1, 1998, to:

Dr. Anjum Ansari
Physics Department, M/C 273,
University of Illinois at Chicago
845 West Taylor Street
Chicago, IL 60607

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

POSTDOCTORAL FELLOW/RESEARCH FELLOW

Available January 1998 for recent graduates with a Ph.D. in molecular biology or cell biology interested in the importance of developmental biology for cancer research. Send curriculum vitae and names of three references to: Mark A. Israel, M.D., PIBS Graduate Program in Developmental Biology and Department of Neurological Surgery, University of California, San Francisco (UCSF), 513 Parnassus Avenue, San Francisco, CA 94143-0520. E-mail: israel@cgl.ucsf.edu.

POSITIONS OPEN

POSTDOCTORAL POSITION MAYO CLINIC

POSTDOCTORAL POSITION will be available starting April 1, 1998, in Laboratory of Vascular Molecular Biology directed by Zvonimir S. Katusic, M.D., Ph.D. The focus of the research program is on endothelial regulation of vascular tone and development of gene therapy of vascular diseases. Experience in molecular biology and cell culturing techniques is required. Send curriculum vitae and names of three references to: Zvonimir S. Katusic, M.D., Ph.D., Department of Anesthesiology, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905. E-mail: katusic.zvonimir@mayo.edu.

AWARD

THE LOUIS AND ARTUR LUCIAN AWARD FOR RESEARCH IN CIRCULATORY DISEASES

Each year a committee from the McGill University Faculty of Medicine confers the Louis and Artur Lucian Award (\$40,000 Canadian) for outstanding research in the field of circulatory diseases. The purpose of this Award is to honor a Scientific Investigator or group of Investigators whose contribution to knowledge in this field is deemed worthy of special recognition. The successful applicant is invited to spend a short period of time at McGill University to give a formal Lucian Lecture and to have interchanges with members of the McGill community. Submissions should be received on or before April 1st, 1998.

For information and requests of nomination forms, please contact:

Dr. René P. Michel
Secretary, The Louis and Artur Lucian
Award Committee
McGill University
Department of Pathology
3775 University Street
Montreal, Quebec H3A 2B4 Canada
Telephone: 514-398-7192, ext. 7194
FAX: 514-398-7446
E-mail: michel@pathology.lan.mcgill.ca

ANNOUNCEMENTS

Call for proposals: Basic and clinical research on Duchenne muscular dystrophy therapeutics.

The Duchenne Parent Project, an international cooperative of parents with children with muscular dystrophy, is soliciting **GRANT APPLICATIONS** relating to the advancement of novel therapeutics for Duchenne muscular dystrophy. Basic research on pharmacological approaches toward altering the pathophysiology of the disease, or research on dystrophin delivery approaches will be considered. Support of human clinical trials is also a priority of the funding group, and the DPP also facilitates clinical trials in the dog model of DMD. The Duchenne Parent Project is particularly interested in novel approaches that are underrepresented in funding programs of other foundations.

Application deadline is March 1, 1998, for grants to be awarded July 1, 1998. Application forms are available from the DMDRC website: <http://www.mgen.pitt.edu>; FAX: 412-624-1401.

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: Lawrence Shattuck, M.Ed., The New England College of Optometry, The Office of Admissions, 424 Beacon Street, Boston, MA 02115.

EUROPEAN CAREER OPPORTUNITIES

Position opening for a Maître de Conférences (ASSISTANT PROFESSOR) at the University of Strasbourg in developmental biology. The University of Strasbourg will hire for a permanent position a Maître de Conférences, starting October 1998. Teaching commitments (198 hours per year) are in developmental biology and courses must be given in French. Candidates should have a Ph.D. (or equivalent) and an excellent training in *Drosophila* genetics. The successful applicant is expected to do his/her research at the Institute of Molecular and Cellular Biology in Strasbourg in the field of *Drosophila* innate immunity. For further information, please contact: Dr. J. Hoffmann, e-mail: jhoff@ibmc.u-strasbg.fr.

EUROPEAN CAREER OPPORTUNITIES



MAX-PLANCK-INSTITUT FÜR CHEMISCHE ÖKOLOGIE

Two **POSTDOCTORAL POSITIONS** in evolutionary genetics are available in the Department of Molecular Genetics and Evolution at the Max-Planck-Institute for chemical Ecology in Jena, Germany. We seek Population and Quantitative Geneticists to study evolution of genes responsible for insect resistance in *Arabidopsis* and *Arabis*. English is the daily language within the Institute. Additional information can be found at website: <http://www.mpg.org/ICE.htm>.

Review of applications will begin 15 January 1998 and continue until suitable candidates have been found. Please send curriculum vitae, statement of research interests, and arrange to have three letters of reference sent to: Thomas Mitchell-Olds, Max-Planck-Institut für chemische Ökologie, Tatzendpromenade 1a, 07745 Jena, Germany. Telephone: 49-3641-643657; FAX: 49-3641-643653; e-mail: tmo@arabis.net.

COURSES & TRAINING

REPRODUCTIVE BIOLOGY

The Graduate and Postdoctoral Training Program established by the Center for Reproductive Biology between the University of Idaho, Moscow, Idaho and Washington State University, Pullman, Washington is seeking applicants. The Center has 37 independent faculty and the training program involves 14 different established degree programs. This integrative program involves the molecular, cellular, and physiological aspects of reproduction in areas such as gamete biology, mammary biology, cattle reproduction, reproductive toxicology, neuroendocrinology, gonadal biology, fish reproduction, plant reproduction, pregnancy/implantation, and reproductive medicine. The many program activities result in a strong interactive environment. Interested individuals can obtain more information by contacting the address below or visiting our website: www.crb.wsu.edu/; and/or contacting the address: Training Program, Center for Reproductive Biology, Washington State University, Pullman, WA 99164-4231. Telephone: 509-335-2473; FAX: 509-335-2176; e-mail: crb@mail.wsu.edu. The University of Idaho and Washington State University are Affirmative Action/Equal Opportunity Employers.

NASA PLANETARY BIOLOGY INTERNSHIPS

The Mariner Biological Laboratory, Woods Hole, Massachusetts, invites applications from graduate students and seniors accepted to graduate programs for internships to explore scientific questions of global scale about the planet Earth. Interns will receive awards of \$2,200 plus travel to participate in research at NASA centers and collaborating institutions for approximately eight weeks. Typical intern programs include global ecology, remote sensing, microbial ecology, biomineralization, origin and early evolution of life. Application deadline: March 2, 1998. For information/applications, contact: Michael Dolan, Planetary Biology Internship, Department of Biology, Box 3-5810, University of Massachusetts, Amherst, MA 01003-5810. E-mail: pbi@bio.umass.edu. Telephone: 413-545-3223. An Equal Opportunity Employer/Affirmative Action Institution.

SHORT COURSE ON THE THEORY AND PRACTICE OF FLOW CYTOMETRY. Earn three semester hours January 12-16 at the University of Colorado at Colorado Springs with Dr. Douglas Swartzendruber. Topics to be studied include light sources, fluidics, fluorescent dyes, data collection and analysis, and applications in biological research and clinical medicine. Tuition \$1,025. Enrollment is limited. Contact: Continuing Education, Telephone: 719-262-3365; e-mail: conted@mail.uccs.edu for course details.

INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

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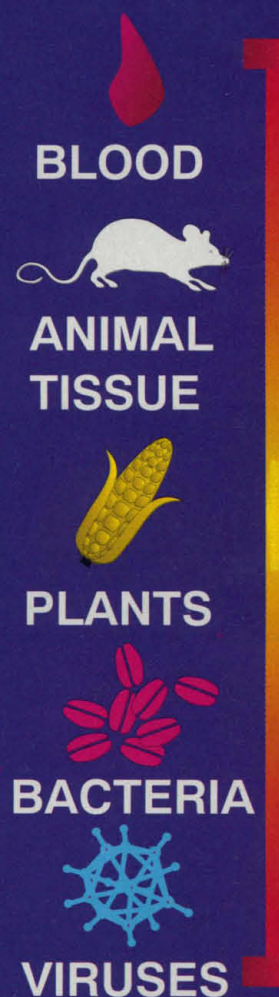
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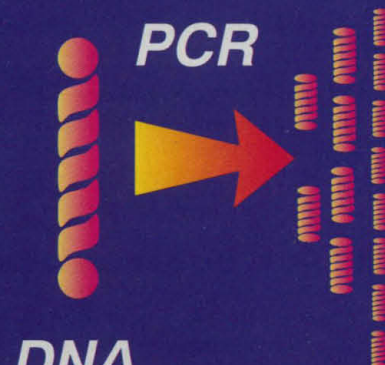
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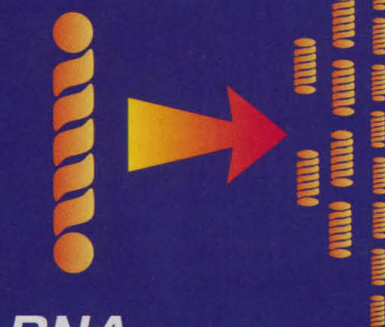


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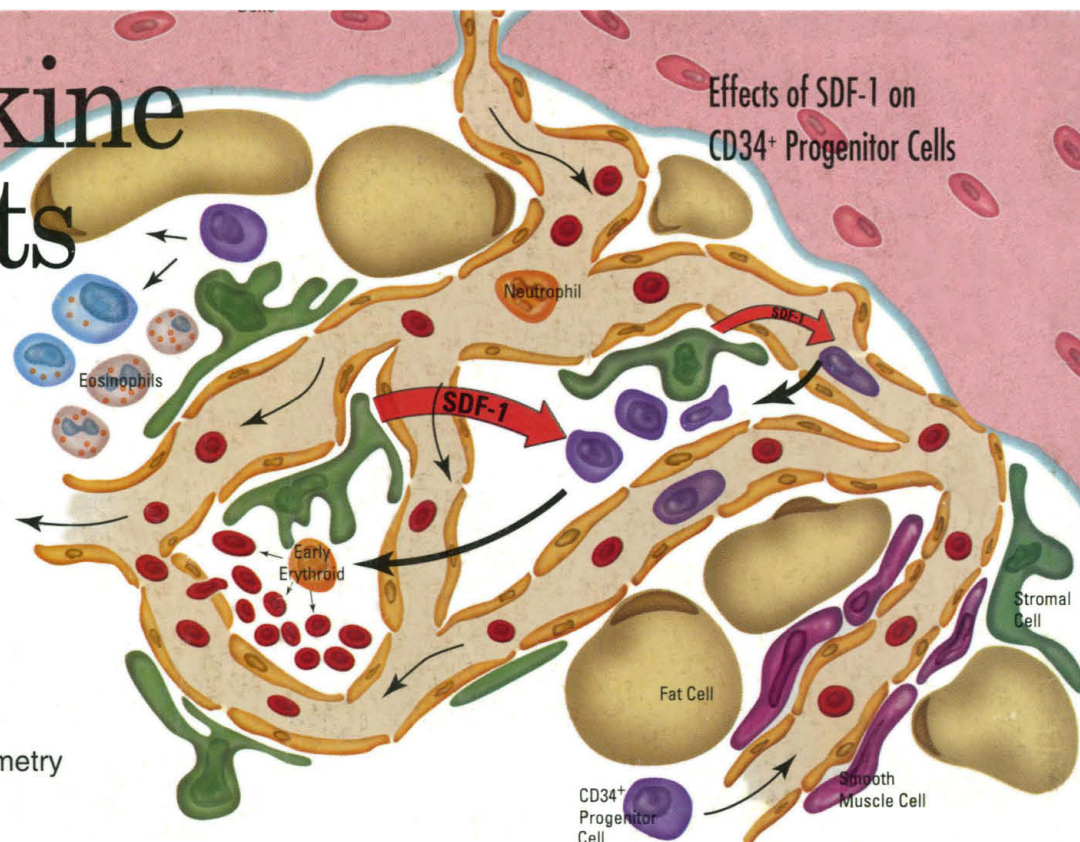
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| MIP-3β | C-C | ✓ | | | | | | | | |
| RANTES | C-C | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| TARC | C-C | ✓ | | | | | | | | |
| CRG-2 | C-X-C | | | | | | ✓ | ✓ | | |
| ENA-78 | C-X-C | ✓ | | ✓ | ✓ | | | | | |
| GROα | C-X-C | ✓ | | ✓ | ✓ | | | | | |
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| MIP-2 | C-X-C | | | | | | ✓ | ✓ | | ✓ |
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AF= Antigen-affinity purified polyclonal antibody

MAB= Monoclonal antibody

BAF= Biotinylated antigen-affinity purified polyclonal antibody

AB= Polyclonal antibody

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