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PRODUCTS

control of image acquisition and analysis, customized user protocols, and a hardware-compatible process through which they can interact with their specimens. It is available for Macintosh, Windows 95, and Windows NT platforms. It provides scientific image acquisition, visualization, analysis, and laboratory automation in a single package. Applications include microscopy, low-light imaging, biomedicine, astronomy, remote sensing, and others. **Scanalytics.** For information call 703-208-2230 or circle 140 on the Reader Service Card.

Enhanced Flow Cytometer

The FACSVantage SE is a new, Sort Enhanced (SE) version of an established flow cytometer. High-speed signal-processing electronics supports increased analysis rates and sort throughputs. Non-rectangular sort regions are standard on the instrument and work with multiple laser excitation for maximum flexibility. New options include a sixth fluorescence detector, third laser excitation



spot, and faster well-to-well access through an automated cell deposition system. Another new option, SortWatch, is an integrated machine-vision sort-monitoring system. Another feature, IndexSort, provides specific information on individual cells sorted into a 96-well tray, information that can be used later to correlate subsequent colony growth and facilitate identification. **Becton Dickinson Immunocytometry Systems.** For information call 800-223-8226 or circle 141 on the Reader Service Card.

Yeast Plasmid Preparation

The EZ Yeast Plasmid Prep kit is a simple, efficient lysis method for *Escherichia coli* that has been modified for yeast plasmid isolation, making it possible to isolate high-yield yeast

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Dual Luminescence Assay System

FireLite is a homogeneous luminescent assay system that allows the sequential detection of firefly and renilla luciferase expression from cells in a microplate format. FireLite provides a long-lived (up to 5 hours) linear signal that overcomes the problems associated with typical "flash" signal assays and that can be used for moderate- to high-throughput screening applications. **Packard Instrument.** For information call 800-323-1891 or circle 143 on the Reader Service Card.

Coated Microscope Slides

Glass microscope slides with ligands covalently attached are available. Ligands include streptavidin, metal chelates, protein A, protein G, Con A, and glutathione. The clarity of the glass is unaffected by the binding process. Slides with covalent attachment sites for the immobilization of cells and antibodies are also available. The slides can be used for cell panning, in situ hybridization, and many other applications. The same surfaces are available on glass cover slips. **XENOPORE.** For information call 973-423-2400 or circle 144 on the Reader Service Card.

Adenovirus Expression Vector Kit

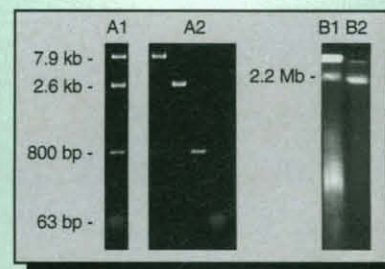
This kit allows for efficient generation of recombinant adenovirus through a method that makes use of genomic DNA-terminal protein complex and cosmid inserted with target genes (COS-TPC method). With this method, the desired recombinant adenovirus can be obtained at much higher efficiency, hundreds of times higher than by conventional methods. Adenovirus vectors have many advantages for use in gene transfer—they are available from many kinds of ani-

(continued on page 1104)

Pure, Intact DNA or RNA... it's Easy with Epicentre's GELase™ Preparation!

Epicentre's unique GELase™ Agarose Gel-Digesting Preparation offers these advantages in purifying nucleic acids from LMP-agarose gels:

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DNA from 63 bp to 7.9 kb (A1) and 2.2 megabases (B1) was separated by electrophoresis on LMP-agarose, recovered using GELase Preparation, and analyzed by electrophoresis on new LMP-agarose gels (A2 & B2). The DNA was recovered undegraded and in high yield.

(Pulsed-field CHEF gels B1 & B2 courtesy of L. Chen & A. Atherly, Zoology & Genetics, Iowa State Univ., Ames, IA.)



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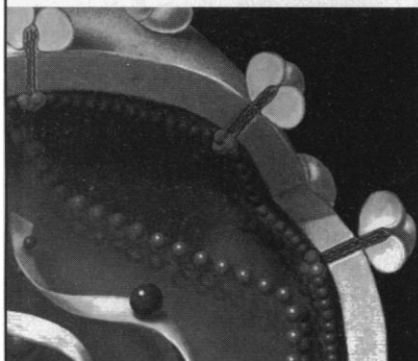
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SCIENCE

(continued from page 1103)

mals, from various cells, and from cells at various phases. In addition, high-titer virus can be obtained. **Takara Shuzo.** For information call +81 77-543-7247 or circle 145 on the Reader Service Card.

Safety-Vented Wash Bottle

The Scienceware Safety-Vented Wash Bottle features a patented, two-piece venting assembly that virtually eliminates pressure build-up of solvents within the bottle, eliminating drips from the spout due to internal evaporation. The elimination of drips helps prevent solvent damage to benchtops and equipment from carelessly placed dripping bottles and reduces the number of times bottles must be refilled. Air



quality in the lab is improved, thanks to reduction of volatiles escaping into the environment. The bottles are made of low-density polyethylene, have a capacity of 500 ml, and are available with labels for six common solvents, as well as unlabeled. The labels are for acetone, ethanol, ethyl acetate, isopropanol, methanol, and methyl ethyl ketone. **Bel-Art Products.** For information call 800-4BELART or circle 146 on the Reader Service Card.

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Literature

Cetac Direct Express: ICP and ICP-MS Torches is a catalog on a line of torches for inductively coupled plasma spectroscopy. **Cetac Technologies.** For information call 402-733-2829 or circle 150 on the Reader Service Card.

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

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The Nobel Prize winning PCR process is covered by patents in many countries throughout the world. Because PCR is patented, using PCR, even for research, requires a license. In keeping with our philosophy of maximizing scientists' access to PCR, Perkin-Elmer makes licenses available in a number of ways. To make it easy for users to obtain the PCR rights they need, we not only offer PCR rights in a variety of ways directly to end users, we also have licensed many of our competitors to convey these rights with their products.

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need to purchase the appropriate PCR research rights directly from Perkin-Elmer.*

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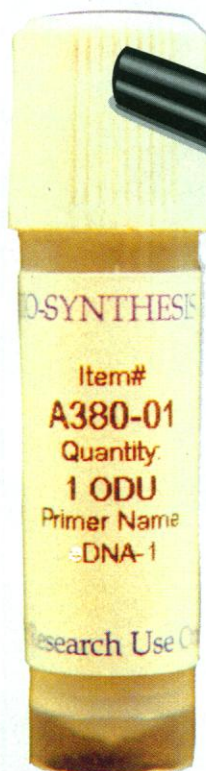
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The following organizations have placed full-page recruitment advertisements in the special advertising supplement in this issue beginning on page 1109.

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The East Coast in 1998: BioPharma's Career Corridor

The world's greatest concentration of biopharmaceutical companies, institutions, and talent stretches up and down the East Coast, from New England to the Carolinas. About 60 percent of all pharmaceutical and biotechnology jobs in the United States are found in this thriving corridor. Synergistic Media Network, Inc., of San Francisco, tracks regional "hotbeds" of the biopharma industry, where career opportunities abound. It credits the East Coast with four global hubs with the picturesque names Genetown (Massachusetts), Pharm Country (New York, New Jersey, Pennsylvania), BioCapital (Maryland, Washington, D.C.), and Research Triangle (North Carolina).

Below we move along the corridor to sample career prospects at Osiris Therapeutics, Inc., Pasteur Mérieux Connaught USA, and Sphinx Pharmaceuticals.



An Unbeatable Combination for Dynamism and Growth: Daniel R. Marshak of Osiris Therapeutics, Inc.



Daniel R. Marshak

Daniel R. Marshak, of Osiris Therapeutics, Inc. in Baltimore, is enthusiastic about the vibrant environment for biomedical research that Maryland government officials have created in the state. With the biotechnology industry's own dynamism and growth, it makes for an unbeatable combination for individuals seeking careers in the biotechnology and pharmaceutical industries.

"There are quite a few job opportunities in the Baltimore and suburban Maryland area," said Marshak, who is the Osiris senior vice president, research and development, and chief technology officer. "There's also stability, with a good success rate among many companies that located here. Many companies are doing well, and looking for qualified people all the time."

Osiris, which was founded in 1993 and has 105 employees, is one example. Osiris is engaged in research and development of therapeutic products for the regeneration of human connective tissue by using human mesenchymal stem cells (hMSCs), progenitor cells responsible for the formation of these tissues. Connective tissues such as bone, cartilage, tendon, ligament, bone marrow stroma, fat, and muscle have many therapeutic applications in regeneration of tissue damaged by injury, aging, or disease.

Besides the research on cells as therapeutic tools, Osiris now is scaling up a process to make large quantities of human hMSCs from a small sample collected from a patient by needle aspiration. That creates a demand for personnel with skills in cell processing and product development areas. What kinds of personnel? Osiris needs scientists with backgrounds in cell biology, biochemistry, chemical engineering, molecular biology, and cell culture technology. Jobs are available on the B.S./M.S. through Ph.D. levels.

Marshak foresees more opportunities for individuals with skills in scale-up, product development, clinical regulatory affairs, and related fields as biopharma firms bring products to market. Demand for careers in the research end of R&D will continue, of course, but the development end may account for many of the openings.

Applicants interviewing for any biopharma job should, of course, have basic knowledge about their potential employer's research fields and products. "We don't have unreasonable expectations for candi-

continued ►

Michael Woods writes frequently on the biotechnology and pharmaceutical industries.



UNITED STATES FOOD AND DRUG ADMINISTRATION CENTER FOR VETERINARY MEDICINE

RESEARCH MICROBIOLOGIST OFFICE OF RESEARCH LAUREL, MD

The Center for Veterinary Medicine (CVM) announces an opening for the position of Research Microbiologist, Division of Animal and Food Microbiology, Office of Research. Applications must be received by June 1, 1998.

The incumbent plans, coordinates, and conducts applied research in food and environmental microbiology to address problems associated with human food-borne pathogens in animal-derived food as provided in the President's Food Safety Initiative (FSI). The incumbent is expected to identify and investigate phenomena related to the use of antibiotics in food-producing animals. This research requires an environmental/ecological perspective on the part of the incumbent in order to design research that can describe the microbiology of the animal production environment, including such factors as antibiotic usage that may select for drug-resistant human pathogens in animals. Of particular importance will be issues associated with the development and transmission of antibiotic resistance in the animal environment. This research also involves the evaluation and development of various detection and enumeration methodologies that can be applied to research and regulatory requirements. The incumbent may serve as a Project Officer on extramural research projects that are directly related to the Center's intramural programs. The incumbent is also expected to provide in-depth scientific review and evaluation of technical data submitted by industry as part of a New Animal Drug Application.

Salary: this is an excepted service position in the Senior Biomedical Research Service (SBRS), with a salary range from \$106,412 to \$136,700.

Qualification Requirements: Applicants must have a doctorate in microbiology, medicine, veterinary medicine, biology, or closely related biological science; and demonstrated national and international recognition in molecular biology or closely related field of expertise compatible with the responsibilities defined above.

RESEARCH MICROBIOLOGIST OFFICE OF RESEARCH LAUREL, MD

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DIRECTOR, DIVISION OF ANIMAL MICROBIOLOGY OFFICE OF RESEARCH LAUREL, MD

The Center for Veterinary Medicine (CVM) announces an opening for the position of Director, Division of Animal and Food Microbiology, Office of Research. Applications must be received by June 1, 1998.

The Director, Division of Animal and Food Microbiology is responsible for implementing the research programs in CVM provided in the President's Safety Initiative (FSI), exercising administrative and programmatic control over the program. The objective of the FSI is to reduce the incidence of food-borne illness in the United States. The Center for Veterinary Medicine's responsibilities in FSI are focused on the reduction of food-borne pathogens in animal-derived food resulting from the use of antibiotics in food-producing animals. The responsibilities also include research focused on the development of antibiotic resistance as well as the contribution of animal feeds to the level of pathogens in animal-derived food. The incumbent is responsible for furthering the goals of equal employment opportunity.

Salary: This is an excepted service position in the Senior Biomedical Research Service (SBRS), with a salary range from \$106,412 to \$136,700.

Qualification Requirements: Applicants must have a doctorate in microbiology, medicine, veterinary medicine, biology, or closely related biological science; demonstrated, or potential, management experience in managing a significant research program in the Federal government, academia, or industry; and demonstrated national and international recognition in their field of expertise compatible with the responsibilities defined in the FSI for the Center for Veterinary Medicine.

To Apply: Submit application material to: **John Anderson, Office of Human Resources and Management Services Food and Drug Administration, Room 7B-32, HFA-408, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857.** For further information contact Mr. Anderson by phone on 301-827-4179 or by fax on 301-443-6703.



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Animal Model Research - B.S./M.S. in biological sciences with 2+ years experience in animal models of inflammation and immune disease as well as with acute and chronic inflammation and antigen-specific immune response. Skills in FACS, Elisa, RIA and additional in vitro assays and spreadsheet experience are essential. **Code: PRJA36KM**

BIOMOLECULAR SCREENING

Associate Research Scientist - B.S./M.S. with 3+ years experience in drug discovery/screening and secondary evaluation of lead compounds to develop/implement automated screens in support of therapeutic areas. **Code: PRJA36KD**

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ABL-Basic Research Program

POSTDOCTORAL FELLOWSHIPS

at the National Cancer Institute-Frederick Cancer Research and Development Center

Molecular Virology and Carcinogenesis

George F. Vande Woude, Ph.D., Program Director – molecular basis of neoplastic transformation; function of Mos in meiosis and transformation; hepatocyte growth factor/scatter factor and the Met receptor in tumorigenesis and metastasis

Alan R. Rein, Ph.D. – molecular mechanisms of retroviral replication; interactions of retroviral proteins with nucleic acids; viral pathogenicity

George N. Pavlakis, M.D., Ph.D. – eukaryotic gene regulation; molecular biology of HIV and pathogenesis of AIDS

Barbara K. Felber, Ph.D. – molecular biology of human retroviruses: posttranscriptional mechanisms of gene regulation

Karen Vousden, Ph.D. – functions of tumor suppressor proteins and cell cycle regulators with emphasis on p53

Cancer and Developmental Biology

Colin L. Stewart, Ph.D. – development of the mammalian embryo; growth factors and cell-cell interactions; genomic imprinting

Lino Tessarollo, Ph.D. – role of neurotrophins and their receptors in mouse development; gene targeting; mouse models

Molecular Basis of Carcinogenesis

Stephen H. Hughes, Ph.D. – retroviral replication; structure and function of HIV reverse transcriptase; retroviral vectors; transgenic birds and mammals

Peter F. Johnson, Ph.D. – the C/EBP family of transcription factors: structure and domain organization, regulation of expression, and analysis of biological functions using knockout mice; regulation of cytokine gene transcription

Nancy Rice, Ph.D. – the *rel* oncogene and the related NF- κ B family of transcription factors

Deborah K. Morrison, Ph.D. – proteins involved in mammalian and *Drosophila* signal transduction pathways; structure/function analysis of the Raf-1 and KSR kinases

Mammalian Genetics

Neal G. Copeland, Ph.D. – development of mouse models of human disease; neurofibromatosis; myeloid leukemogenesis; gene targeting in ES cells

Nancy A. Jenkins, Ph.D. – molecular genetics of mouse development; transgenic mice; positional cloning of mouse mutations; genetics of the cytoskeleton

Shyam Sharan, Ph.D. – functional analysis of murine homologue of human breast cancer susceptibility genes, BRCA1 and BRCA2; identification of proteins interacting with Brca1 and Brca2

The ABL-Basic Research Program is dedicated to basic research in molecular biology, biochemistry, crystallography, genetics, virology, and organic chemistry. The scope of current projects is indicated by the research interests of the senior scientists listed above. Senior staff members enjoy complete independence in their choice of research problems and are accorded excellent facilities to accomplish their goals. A vigorous seminar program, implemented by formal and informal arrangements with the National Institutes of Health, Johns Hopkins University, University of Maryland, and other research and academic institutions, provides opportunities for extensive interaction within the scientific community.

The Frederick Cancer Research and Development Center is located in Frederick, Maryland, which, with its 50 mile proximity to Washington, D.C., and Baltimore, offers a rich scientific and cultural environment, as well as a quiet country setting.

Fellowships are awarded on an equal opportunity basis to recent recipients of an M.D., a Ph.D., or an equivalent degree in the biological or biochemical sciences. Postdoctoral training opportunities are available with the staff members listed above as well as other scientists associated with the Program.

Macromolecular Structure

Alexander Wlodawer, Ph.D. – structure of enzymes and cytokines studied by X-ray diffraction

Christopher J. Michejda, Ph.D. – antineoplastic and antiviral drug design; biochemical and molecular pharmacology

R. Andrew Byrd, Ph.D. – solution structure and dynamics of proteins and protein:nucleic acid complexes studied by macromolecular NMR techniques and novel isotopic labeling schemes

Xinhua Ji, Ph.D. – X-ray crystallography of detoxification enzymes and ligand-binding proteins

David S. Waugh, Ph.D. – protein engineering; gene expression technology; protein folding *in vivo*; structural biology of signal transduction

Gene Regulation and Chromosome Biology

Jeffrey N. Strathern, Ph.D. – recombination; pseudogene formation; DNA repair in yeast; cell type regulation; gene expression

David J. Garfinkel, Ph.D. – mechanism and consequences of Ty retrotransposition; retrotransposon/retroviral hybrids; genome stability; gene regulation

Amar J.S. Klar, Ph.D. – mating-type switching and gene silencing of fission yeast; cell differentiation and development; molecular genetics of human handedness

Stuart J. Austin, Ph.D. – chromosome stability in bacteria: regulation of plasmid replication and distribution of copies to daughter cells; plasmid maintenance in enteric disease

Donald L. Court, Ph.D. – regulation of gene expression at transcriptional and posttranscriptional levels; cell growth and cell cycle control

Andy Golden, Ph.D. – cell cycle regulation in the nematode *C. elegans*; the role of *cdc25* and *wee1* genes in development

Mikhail Kashlev, Ph.D. – molecular mechanism of transcription elongation in the bacteria *E. coli* and the yeast *S. cerevisiae*; regulation of transcription pausing, arrest, and termination; conformational changes in RNA polymerase during RNA chain extension

Chemistry of Carcinogenesis

Anthony Dipple, Ph.D., D.Sc. – polycyclic aromatic hydrocarbon carcinogenesis and mutagenesis; chemical carcinogen-DNA interactions

Robert C. Moschel, Ph.D. – chemotherapy adjuvants; chemical synthesis of carcinogen-modified DNA; DNA adduct-induced mutagenesis in bacteria and mammalian cells

Appointments are made for one year, renewable annually with supervisor's approval, for up to three years.

Annual stipends generally range from \$29,000 to \$32,600, depending upon experience.

Applications are accepted at any time during the calendar year for open positions. Interested individuals are encouraged to apply well in advance of their availability date. The ABL-Basic Research Program is an equal opportunity employer.

To apply, send a letter describing your research interests, a curriculum vitae, and the names and addresses of three references to the investigator(s) of interest, c/o:

**ABL-Basic Research Program
Human Resources Dept./SC
NCI-FCRDC
P.O. Box B, Bldg. 428
Frederick, Maryland 21702-1201**

Operated by Advanced BioScience Laboratories, Inc., under contract with the National Cancer Institute.

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Taking Scientific Excellence Beyond The Boundaries.

At Pfizer, the most innovative developments occur beyond the boundaries of conventional science. From your mind, to our labs, to global markets, we're constantly pushing the limits. Which means a single idea of yours could have the power and potential to change the lives of people the world over. With research facilities in Groton, CT, Sandwich, UK, and Nagoya, Japan, Pfizer is effectively reaching the far corners of the world with innovative, powerful drug discovery and development. Our commitment is as wide as it is deep, and results in unprecedented growth opportunities. We currently have more projects in discovery and development than at any other time in our history, with an anticipated investment of \$2 billion in R&D this year alone. And, our latest expansion includes a million square feet of lab space, effectively doubling our capacity to develop new drugs.

Pfizer not only represents a well-resourced effort to create the next generation of medicines, but also a launch pad for high-level career growth. Because discovering drugs is expensive, risky and time-consuming, we are 100% committed to hiring only the best in their fields; people who are curious, energetic and optimistic about the risks and rewards of drug research. The Pfizer approach is destined to improve our people, our pipeline and our prospects for continued scientific excellence.

**Pfizer
Central
Research**
Personnel Dept
Ramsgate Road
Sandwich, Kent CT13 9NJ
UNITED KINGDOM

**Pfizer
Pharmaceuticals**
(Nagoya Plant/Research)
5-Gotchi, Taketoyo-Cho
Chita-Gun
Aichi-Ken 470-23, JAPAN

For information on positions at these locations, contact addresses listed above.

NEUROSCIENCE

Ph.D. Research Scientist

We are seeking to expand our efforts in programs to identify drug candidates in the areas of neurodegeneration and psychotherapeutics. Responsibilities include supervising a laboratory which contributes to neuroscience project teams by using molecular biology techniques to generate new targets, screens and disease models. Ph.D. and 2+ years' post doctoral experience, strong publication record and a blend of skills and experience in contemporary molecular biology including demonstrated expertise in library construction and screening, gene/cDNA cloning, PCR, protein expression, computer analysis of nucleic acid sequences, and cell culture required. Research experience in molecular neuroscience, particularly in the areas of neurodegenerative diseases, substance abuse or psychotic disorders preferred.

Job Code: 2630

MEDICINAL CHEMISTRY

BS/MS/Ph.D. Scientists

Qualified candidates will have a degree in a relevant field and a strong theoretical background in synthetic organic chemistry including advanced courses. Knowledge and experience in isolation, separation, organic reaction mechanisms, and identification techniques utilizing IR, NMR, and Mass Spectroscopy are required. Research experience, particularly in undergraduate research, is highly desirable.

Job Code: 2631

At Pfizer, purpose plus performance equals pride. We meet our goals in a productive, team-based environment, where colleagues share their ideas. We invest in our team by providing many opportunities for learning, including workshops and seminars, 100% reimbursement for accredited degree programs, on-site graduate degree programs with Brown University and University of Rhode Island and computer training courses. We even offer scholarships for children of Pfizer employees. Pfizer also understands the importance of work/family balance. Our work ethic is complemented by our life-friendly policies, volunteer programs and extracurricular activities. Located in historic Groton, a seaside town in Southeastern Connecticut, Pfizer offers you a high quality of life close to New York City, Providence and Boston. Visitors flock to the region for foliage festivals and maritime activities, and residents love the area for its four seasons and year-round outdoor activities.

The benefit of working with Pfizer extends far beyond the competitive salaries, relocation assistance, daycare, and volunteer programs. It's the chance to work and grow with a global leader who recognizes potential and capitalizes on opportunity. It's the ability to prove - and improve - yourself and your ideas. For immediate consideration, please forward your CV, indicating area of interest, to: **Employee Resources, Central Research Division, Pfizer Inc., Job Code #: _____, Eastern Point Road, Groton, CT 06340.** We are an equal opportunity employer M/F/D/V.

Pfizer's growth has created many career opportunities. For more information on positions in other disciplines, please visit our Web site: www.pfizer.com.



We're part of the cure.

Insights on Skill Development

Ask almost any biopharma employer about nonscience skills that give one applicant an edge, and ability to communicate often tops the list. Whether it's discovery science or marketing, employees must explain complex topics in clear, understandable terms. But how can a student or scientist develop and hone these skills? Here are thoughts from Osiris's Daniel R. Marshak:

Written and oral communication skills are essential. Many people emerge from graduate school or postdocs as excellent scientists but mediocre communicators. Science majors should definitely consider taking speech and writing courses as electives. Like other companies, Osiris sometimes enrolls employees in training courses sponsored by the American Management Association and other organizations that teach communications skills.

But don't overlook one easy and enjoyable way to develop these skills. Read as much as you can. People who read a lot, I think, tend to be good writers. I don't mean just scientific literature. Get the New Yorker, Atlantic Monthly, the New York Times, and then actually read them. Read fiction, biographies, any kind of good literature. As you read, pay attention to sentence and paragraph structure. Observe how the author progresses logically from one point to another. Be analytical, noting how authors use words to evoke images in your mind.

Read for pleasure and information acquisition. But also read to learn how to write better in your professional life when you are trying to construct a report, grant proposal, or any other document.

dates," Marshak said. "We don't expect candidates to be experts on developments in an entire sector of biotechnology. But we do expect them to have a basic awareness."

What makes a special impression during an interview? High on Marshak's list is the applicants' ability to explain their previous research in a detailed, understandable way. In doing so, applicants demonstrate that they actually did the research, understood it, and can communicate effectively.

"There are very good jobs available along the East Coast, and especially in Maryland. Competition? Yes, it's there. But for qualified people, there are wonderful career opportunities."

Strong Demand for Doctoral-Level Scientists: Patricia Johnston of Sphinx Pharmaceuticals

"At the Ph.D. level, it's very much an applicant's job market in our region right now," says Patricia Johnston, head of the Lead Generation Biology group at Sphinx Pharmaceuticals in Durham, North Carolina. "Demand for doctoral-level scientists with the right skills is strong in the

facility. When completed this year, the facility will triple Sphinx's laboratory space. Employment will increase from about 100 in 1997 to almost 200.

What kinds of scientists are needed for those jobs? Johnston said that about 60 percent already have been filled with individuals holding B.S., M.S., and Ph.D. degrees. With three major universities nearby, Sphinx has found an adequate supply of B.S./M.S.-level personnel with degrees in fields such as biology, biochemistry, and chemistry. Ph.D.'s with degrees in molecular biology, cell biology, and related fields are more of a challenge. Postdoctoral experience would be a definite plus, she said.

The process of new lead generation integrates a rigorous scientific approach with the demands of high-throughput, miniaturized assay technologies. Success in this arena requires both a solid background in science, a high comfort level with automated instrumentation, and ability to identify ways of improving the technology, Johnston said.

Johnston is excited about applicants who in addition to a strong scientific background have a cluster of skills important for success in a multidisciplinary team environment. High among them are leadership, project management skills, and the ability to communicate effectively. Flexibility to work on different projects involving different diseases is another plus.



Patricia Johnston



John Petraglia

The Human Resources Perspective: John Petraglia of Pasteur Mérieux Connaught USA

John Petraglia, director of staffing and employee relations for Pasteur Mérieux Connaught USA, Swiftwater, Pennsylvania, foresees a strong demand for biopharmaceutical personnel along the East Coast for the rest of 1998.

"There's a lot going on at Pasteur Mérieux Connaught, in the vaccine field, and in the biopharmaceutical industry as a whole," Petraglia said. "We have about 100 job openings, including close to 50 in research. This is a very exciting period, and with a continued strong economy, the demand for new personnel should remain strong in 1999."

Pasteur Mérieux Connaught USA discovers, develops, and produces immunological products for the prevention and treatment of infectious diseases and cancers. As the world leader in human vaccines and biologicals, it produces more than one billion doses of vaccines annually to protect against 18 diseases.

Vaccine research is in the midst of worldwide resurgence, driven by development of patentable bioengineered vaccines, new concerns about disease prevention, and other factors. Pasteur Mérieux Connaught's pipeline includes candidate vaccines for Lyme disease, HIV, gastric ulcers, lower respiratory tract infections, and other conditions.

The boom is creating demand for personnel in jobs ranging from discovery research to clinical trials, to regulatory affairs and

continued ►

Research Triangle Park area, and probably will remain that way."

Sphinx's own story illustrates how the pure dynamism of biopharma hotbeds spawns new career opportunities. Duke University professor Robert Bell spun the company out of his laboratory in 1988. Sphinx was a pioneer in the super-hot fields of combinatorial chemistry and high-throughput screening. Sphinx developed a proprietary combinatorial chemistry program for generating tens of thousands of small organic molecules. High-throughput screening provided a rapid way of testing the molecules for biological activity and identifying drug candidates. Screens that once took a year now may take only weeks.

The firm was acquired by Eli Lilly and Company in 1994. Sphinx scored key research successes and in 1997 Lilly decided to invest \$55 million in a new 150,000-square-foot research

The Untapped Power of **DISCOVERY**

Established in 1993, **SCRIPTGEN** has become a leading molecular therapeutics company by developing unique drug discovery technologies that represent breakthrough advances in the race to develop effective therapies. Our proprietary, affinity-based screening system, ATLAS (Any Target Ligand Affinity Screen) allows novel protein targets to be screened in a high throughput mode, and our SCAN (Screen for Compounds with an Affinity for Nucleic Acid) as well as RNA transcripts technologies are facilitating the discovery of important drugs that regulate RNA. The success of these technologies has created expansion opportunities in our research organization.

MS/PhD Protein Biophysicist/Protein Folding Position involves biophysical characterization and investigation of the thermal stability of macromolecular targets in highly collaborative interdisciplinary drug discovery programs. Applicants should have at least 3-5 years of experience with biophysical techniques: CD, fluorescence, calorimetry, and light scattering; facility with protein biochemical methods: mutagenesis, protein expression and purification, gel electrophoresis, and measurement of enzymatic and binding activities. Experience in matters of protein folding strongly preferred.
Job Code: AFF15

MS/PhD Biochemist Contribute to a dynamic growing effort in developing drug discovery technologies. We are seeking a PhD or MS-level person with 3+ years of experience to develop high throughput homogeneous affinity-based assays. Assay development experience is essential. Experience with applied fluorescence spectroscopic and other applied analytical techniques amenable to adaptation for use in high throughput screening is strongly preferred.
Job Code: AFF19

BS/MS Biochemists/Protein Chemist Develop novel drug discovery technologies. 1-2+ years of experience in protein chemistry or related field required. Experience in analysis of protein-protein interactions, enzyme-antibody conjugation, and assay development highly desirable. **Job Code: AFF20**

BS/MS Biochemist(s) Conduct drug discovery research in an interdisciplinary anti-viral drug discovery program. 2-5+ years of laboratory experience in molecular biology and biochemistry, including molecular cloning, protein expression, purification and characterization required. Expertise in bacterial, baculoviral, and yeast expression systems is desirable. **Job Code: AFF21**

BS/MS Associate Scientist Join a team studying cancer cell biology, focused on discovering novel anti-cancer drugs. Must have BS and/or MS with experience in molecular biology, biochemistry and the ability to work well in a team setting. Experience in protein expression/purification and cell culture is a plus. Strong interpersonal, organizational and communication skills are imperative. **Job Code: AFF23**

MS/BS Virologist We are seeking a BS/MS-level scientist with 0-2 years of experience to work with the Virology team. Candidate must be able to learn many new techniques and work well with others. Techniques will include: cloning, sequencing, protein expression and purification, and enzyme assays. Experience with mammalian cell culture desirable. **Job Code: AFF24**

BS Biochemists Entry-level applicants to participate in highly collaborative interdisciplinary drug discovery programs. Positions involve establishment of novel high throughput discovery assays, development of enzymatic and binding assays, protein expression and characterization, and elaboration of drug candidates. **Job Code: AFF25**

MS/BS Biochemists Applicants should have at least 3-5 years of laboratory experience in biochemical methods, including protein expression and purification, protein folding, RNA biochemistry, immunoassay development, and measurement of enzymatic and ligand binding interactions. **Job Code: AFF26**

PhD Bacteriologist Conduct and manage research in a rapidly growing anti-bacterial drug discovery program. At least two years postdoctoral experience in microbiology, genetics, molecular biology or related field with significant experience in the study of bacterial genetics and biochemistry required. Experience in drug discovery research and/or the genetics of pathogenic bacteria is highly desirable. **Job Code: BAC4**

MS/BS Computer Scientist/Bioinformatics We are seeking a BS/MS-level candidate with expertise in database design & management, and UNIX system administration. The ideal candidate would also have programming (C, C++, PERL) experience and the inventiveness required to optimize currently available DNA sequence analysis software tools for Scriptgen's specific computing needs. **Job Code: BIO2**

PhD Mammalian Cell Molecular Geneticist The successful candidate will play a key role in developing and implementing cutting-edge technologies for the discovery and validation of novel therapeutic targets in mammalian cells. This person must have extensive expertise in molecular genetic techniques in mammalian cells, including DNA transfection and gene targeting methods and the use of viral vectors, as well as in-depth knowledge concerning state-of-the-art approaches for manipulation of gene expression in mammalian cell lines. A PhD with 2+ years of postdoctoral experience is required. The candidate must also possess excellent communication skills and be able to participate as a member of a multi-disciplinary team. **Job Code: CELL1**

PhD - Immunology, Inflammation We are seeking an experienced scientist to lead the development of our program in host responses to infectious diseases. The successful applicant should have a PhD and more than 2 years of postdoctoral experience focusing on the study of the cellular and molecular mechanisms underlying immunologic and inflammatory responses to microbial infection, including pro- and/or anti-inflammatory cytokines and the microbial elicitors of these response pathways. Up-to-date knowledge of techniques for manipulation of genes in mammalian cells, especially cells of immune system origin, is essential. **Job Code: IMM1**

MS/BS Chemist/Biochemist - Manager of Compound Distribution Seeking a highly organized team leader to manage our large compound library and oversee compound distribution for screening, library diversification and quality control. An MS/BS and strong knowledge of chemistry or biochemistry are required. Computer literacy, outstanding communication and management skills, along with a strong desire to work in a multi-disciplinary environment are essential. **Job Code: CH3**

PhD Computational Chemist The qualified candidate will have a PhD in computational chemistry or related field, and can apply computational techniques to small molecule drug discovery. 1-2 years of postdoctoral experience in drug discovery preferred. The ideal candidate should have experience in a variety of modeling tools, as well as expertise in QSAR, library design, data management and SGI system management. **Job Code: CC1**

Postdoctoral Positions:

- Two-year postdoctoral positions are available in several areas:
- HBV and HCV replication. **Job Code: PD11**
- Development of homogenous fluorescent assays. **Job Code: PD13**
- Membrane protein biochemistry. **Job Code: PD14**

- Study the mechanism of action of anti-viral drugs that specifically bind to a critical regulatory RNA structure of the HBV pregenome. **Job Code: PD15**
- Protein folding. **Job Code: PD16**
- Biophysical characterization of proteins. **Job Code: PD17**
- Discovery and development of anti-cancer drugs. **Job Code: PD18**

SCRIPTGEN offers competitive salaries and benefits, along with equity participation. Please send resume, indicating appropriate Job Code, to: SCRIPTGEN Pharmaceuticals, Inc., 200 Boston Avenue, Medford, MA 02155. FAX: 781.396.1028. An equal opportunity employer, m/f/d/v.

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EXCELLENCE WHERE IT MATTERS MOST.



At Johnson & Johnson, we value life. That's why we're committed to meeting our customers' needs by providing the highest quality products and services. We've achieved these goals with advanced technological resources and the dedicated individuals that make up our work force. Our commitment to innovative research in the healthcare industry was formally recognized in 1996 when Johnson & Johnson was awarded the National Medal of Technology. This dedication to innovation will enable us to lead the healthcare industry into the next century and beyond. The R.W. Johnson Pharmaceutical Research Institute (PRI), a subsidiary of Johnson & Johnson, has outstanding opportunities available at its **Spring House, Pennsylvania** research facility.



Central Nervous System (CNS) Research Pharmacology Team Leader in Drug Discovery

This position, reporting to the VP of Research, involves directing a pharmacology research group toward the discovery of new chemical entities for evaluation in human proof of principle clinical trials. The successful candidate will find PRI to be a highly multi-disciplinary environment with close collaborations between pharmacologists, medicinal chemists, and preclinical development staff. PRI is a dynamic and growing pharmaceutical research company. State of the art projects include ultra-fast high-throughput screening of compound libraries and evaluation of the human genome for new emerging molecular targets for drug discovery. The CNS Pharmacology Team Leader will work closely with his/her Chemistry counterpart to set the scientific priorities of the team, perform research with the highest standards possible, establish and meet team budgets, evaluate outside licensing opportunities, and maintain external relationships where appropriate.

To be considered for this position, you must have a leadership position in the field of CNS research in a drug discovery environment, including a strong publication record, participation at scientific meetings, and scientific honors or awards. Exceptional academic scientists with an interest in drug discovery will be considered. Three outstanding references from credible researchers will be required.

We are dedicated to discovering important new medicines to treat debilitating human disorders. The CNS Team Leader position provides the successful candidate the opportunity to improve the quality of life for patients suffering from these disorders. **Dept. 2104.**

Postdoctoral Fellow

In this challenging and rewarding position, you will be responsible for investigating mechanisms of neuropathic pain development. You will also have the opportunity to perform basic research as well as become an integral part of an active drug discovery team.

To qualify, A PhD in Neurobiology, Molecular Biology or a related field is required. Experience in basic molecular biological techniques such as protein expression, gene cloning, and PCR is necessary. Creation of engineered cell lines and bioinformatics experience would be a plus. You must be able to work in a multi-disciplinary environment and possess strong written/verbal communication skills. **Dept. 2109.**

To apply, please forward a scannable resume and salary requirement to: **Dept. # of position of interest, Johnson & Johnson Recruiting Services, PO Box 16597, New Brunswick, NJ 08906-6597.** An equal opportunity employer, m/f/d/v, committed to diversity in the workplace.

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Grant Program for Research on RESVERATROL

Pharmascience, a leading Canadian developer, manufacturer, and distributor of pharmaceutical products, is pleased to announce a grant program to expand research on *trans*-resveratrol.

Pharmascience is a world leader in the production of pharmaceutical grade *trans*-resveratrol.

Trans-resveratrol is a powerful antioxidant found in wine and grapes and has been demonstrated to have important activity on the cardiovascular system, on cancer chemoprevention and neuroprotection. This compound is offered by Pharmascience under the trade name **Resverin™**.

The company's objective is to encourage original scientific research into the *mechanism of action* and *clinical use* of *trans*-resveratrol. Scientists and clinicians with innovative research proposals are invited to apply for a grant.

Application Guidelines

Guidelines can be requested through the following mailing address:

Resverin Grant Program
for Research on Resveratrol
Attn: David W. Goodman, Ph.D.
8400 Darnley Road
Montreal, Qc. H4T 1M4 Canada
Ph: (514) 340 5071
Fax: (514) 340 9920
Email: rgprr@pharmascience.com
or visit our website at www.resverin.com

Proposals will be judged by an international scientific committee representing basic and clinical research.

Grants range between
US **\$10,000** to **\$50,000** each.

Deadline for submission is August 31st, 1998.



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United States Food and Drug Administration

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- **MICRO/BIOLOGIST • CONSUMER SAFETY OFFICERS •**

The Center for Drug Evaluation and Research is searching for outstanding Scientists interested in a challenge by participating in the development and approval process for new drug products. Scientists serve on multidisciplinary scientific teams of highly skilled professionals. Duties include reviewing and evaluating studies submitted by manufacturers in support of Investigational New Drug applications (INDs) and New Drug Applications (NDAs); evaluating adequacy of the methods, facilities and controls used for approval or non-approval of applications; evaluating the quality and adequacy of the manufacturers tests to determine the validity of drug safety and efficacy claims; write reviews of application data, and evaluate marketed events on approved drugs. Opportunities for professional development include further training, attendance at scientific conferences, and interaction with the pharmaceutical industry and academic communities. For additional information regarding the Center, visit their web site at <http://www.fda.gov/cder>.

QUALIFICATIONS: A degree in the specific discipline OR course work that includes 30 semester hours in any combination of biological sciences, chemistry, pharmacy, physical sciences, food technology, nutrition, medical science engineering, epidemiology, veterinary medical science, agriculture, natural resource management or related scientific fields that provide knowledge directly related. A doctorate degree in the discipline and experience in the research, development and manufacture of pharmaceuticals is highly desired. Candidates for Civil Service or Commissioned Corps appointments must be U.S. citizens. Candidates for Staff Fellowships may be either U.S. citizens or U.S. permanent residents. Graduates of foreign colleges/universities must show proof of U.S. education equivalency certification.

LOCATION: Offices are located in several locations throughout the Rockville, Maryland area.

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

HOWTO APPLY: Submit curriculum vitae to:

**DHHS/Food and Drug Administration
7520 Standish Place, MPN1, Room 225, HFD-64
Rockville, Maryland 20855
Attn: Recruitment Staff (SRC 98014)**

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A Human Form of Medicine

Human Genome Sciences (HGS) founded the genomics sector of the pharmaceutical industry five years ago and we continue to blaze new trails. HGS leads the industry in the discovery of human and microbial genes, as well as in determining the functional biology and medical utility of the genes that we have discovered.

HGS believes that the company has discovered at least one copy of more than 95% of all human genes and that we have a full-length cDNA capable of encoding a functional protein corresponding to more than 75% of human genes.

HGS is also the first company to move from concept to clinic using the genomics paradigm. HGS has now initiated three clinical trials of novel human proteins. The company continues to make significant progress in the identification and development of additional therapeutic proteins and drug targets to address significant unmet medical needs.

This new drug discovery paradigm holds exceptional career challenge for world-class scientists who share our vision of the future. Consider the following:

MOLECULAR BIOLOGY

Our Molecular Biology department focuses on identifying, characterizing, and developing novel therapeutic proteins and drug targets for HGS' pre-clinical pipeline. Positions are available for scientists with a Ph.D./M.D. and postdoctoral experience in molecular biology or related science. Experience in one of the following areas is also required: growth factor or cytokine biology, signal transduction, high-throughput genomics applications including database mining, gene transfer applications, and high-throughput screening. **Job Code: SR**

CELL BIOLOGY

Positions are available in our Cell Biology department for a Ph.D./M.D. with 5+ years laboratory experience in one or more of the following areas: cellular immunology with a concentration in T-cell immunology and antigen presentation; cell biology with concentration in cell adhesion and migration; or concentration in fibroblasts and endothelial, smooth, and skeletal muscular cells. Experience in tissue culture, immunoassay development, and flow cytometry is essential. **Job Code: GG**

VETERINARY PATHOLOGIST

A position is available for a D.V.M. with board certification and 3-5 years experience to supervise the activities of the histology section while actively participating in experimental design and interpretation of results. Experience with normal histological procedures and familiarity with immunohistochemical procedures are essential. **Job Code: DM**

PROTEIN PURIFICATION BIOCHEMIST

Scientist positions are available for individuals with a Ph.D. in biochemistry or related discipline and 5 years practical experience in the purification of recombinant proteins. Scale-up experience and knowledge of cGMPs are advantages. **Job Code: RG**

MICROBIOLOGY GROUP LEADER

Group Leader and scientist positions are available for individuals with experience in antibiotic drug discovery, microbial genetics, and characterization of bacterial (gram positive preferred) targets. Strong publication record and leadership/managerial experience are advantages. The Group Leader candidate must have the ability to lead 15-20 researchers. A Ph.D. and 2-5 years postdoctoral experience in microbiology or related field are required. **Job Code: CR**

ASSOCIATE DIRECTOR OF MEDICAL AFFAIRS

The Associate Director of Medical Affairs will help manage the direction of HGS clinical trials. Candidates must have experience with design and implementation of clinical protocols, data collection systems, and directing Phases I-IV clinical trials. This position requires an M.D. and 2+ years experience, knowledge of FDA regulatory requirements, and proven ability to address complex problems. **Job Code: AL**

HGS encourages the pursuit of academic excellence and offers competitive benefits, including educational reimbursement, subsidized health club membership, medical/dental/life/disability insurance programs, and a 401(k) plan with employer match. **To learn more about us, visit our web site at <http://www.hgsi.com>.** For immediate consideration, please send/fax your resume indicating position of interest and job code to **Human Resources Department, Human Genome Sciences, 9410 Key West Avenue, Rockville, MD 20850. FAX: (301) 309-1845.**



An equal opportunity employer



FACULTY and POSTDOCTORAL POSITIONS

The Institute for Genomic Research (TIGR) is a not-for-profit research institute with interests in structural, functional, and comparative analysis of genomes and gene products in viruses, bacteria (pathogens and non-pathogens), archaea, and eukaryotes (both plant and animal), including humans. TIGR is located in Rockville, MD, in the greater Washington, D.C. metropolitan area, and is close to the National Institutes of Health, Johns Hopkins University, The University of Maryland, and other research organizations and biotechnical companies. Institute facilities consist of over 50,000 sq. ft. of laboratory and office space located on a 12-acre campus, with a new 50,000 sq. ft. laboratory/office building under construction for mid-1999 occupancy. TIGR has a large state-of-the-art DNA sequencing laboratory, a high-density cDNA laboratory, and modern facilities for bioinformatics, biochemistry, and molecular biology.

TIGR is recruiting in the following areas:

FACULTY POSITIONS in MICROBIAL GENOMICS

Since 1995, TIGR has completed seven microbial sequencing projects (*Haemophilus influenza*, *Mycoplasma genitalium*, *Methanococcus jannaschii*, *Helicobacter pylori*, *Archaeoglobus fulgidus*, *Borrelia burgdorferi*, and *Treponema pallidum*) and is funded by the Department of Energy and the National Institutes of Health to complete another 20 other microbial genome sequencing projects during the next three years. Applicants are sought with a strong microbiology, molecular biology, and/or molecular evolutionary background to participate in TIGR's ongoing research in microbial genome sequencing, comparative genomics, and functional characterization. Scientists who have a Ph.D., M.D., or equivalent degree with at least two years postdoctoral experience and good computational skills are invited to apply.

POSTDOCTORAL POSITION in the MOLECULAR GENETICS OF CANCER

A postdoctoral position is immediately available to assist in the application of a number of advanced techniques, including laser capture microdissection and cDNA microarraying, to development of molecular transcription profiles of human cancers in research funded as part of the National Cancer Institute's Cancer Gene Anatomy Project (CGAP). A Ph.D. in molecular genetics or a related field, experience in histopathology, and good computational skills are desirable.

TIGR has excellent benefits and we encourage you to apply by submitting a cover letter, curriculum vitae, including a bibliography, a statement of research interests, and the names of three references to:

**The Institute for Genomic Research
9712 Medical Center Drive
Rockville, MD 20850
Attn.: FMG/PD
or fax to: (301) 838-0208**

EOE, M/F, D/V

Call for Recruiters from Industry, Academia and Non-Profit Agencies: NIH Postdoctoral Job Fair

October 6, 1998



Would you like to reach 2,500 of the world's top postdoctoral scientists?

The National Institutes of Health is sponsoring the third annual Postdoctoral Job Fair, to be held in conjunction with the NIH Intramural Research Festival at the Natcher Conference Center on the NIH campus in Bethesda, MD, from 9:00 a.m. to 5:00 p.m. on October 6, 1998. The Job Fair will give exhibitors the opportunity to meet postdoctoral fellows who are completing their research training and seeking permanent employment. We welcome representatives from domestic and foreign industry, the academic community and government and non-profit agencies that have vacant positions which demand highly skilled, highly trained professionals.

Recruiters at the Job Fair will have access to NIH's pool of 2,500 postdoctoral trainees—nearly 15% of the biomedical fellows supported by the NIH in the United States. Their research experience ranges from cutting-edge basic science to clinical investigation and the development of drugs, methods, and technology. Their expertise spans the biomedical spectrum, including:

AIDS research	cell biology	imaging	neuroscience
behavioral science	chemistry	immunology	pathology
biophysics	clinical research	informatics	pharmacology
biostatistics/epidemiology	developmental biology	molecular genetics	structural biology
biotechnology	genomics	molecular biology	virology

Postdoctoral fellows trained at NIH have traditionally become leaders in biomedical research. Many of today's trainees will follow in their footsteps, but a significant number are also interested in careers in other occupational areas where their outstanding training, creativity, and skills would be an asset.

There is no fee for exhibitors at the Job Fair, but space is limited, and early confirmation of intent to participate is recommended. Organizations wishing to recruit at this year's Job Fair should submit a copy of their company's prospectus or a description of their organization, as well as a description of the positions they seek to fill, and name, address, telephone, and e-mail address for their contact person by August 1, 1998 to:

Ms. Shirley Forehand
NIH Office of Education
Bldg. 45, Rm 5AN12K
45 Center Dr. MSC 6505
Bethesda, MD 20892-6505

National Institutes Of Health

The quest for success begins with the best

DuPont is a world leader in research in the chemical and biological sciences, including fundamental and applied research programs ranging from industrial bioprocesses for the synthesis of chemicals and materials to genetically improved crops and discovery of crop protection chemicals. We are now seeking Ph.D. Principal Investigators, as well as M.S. and B.S. support staff to join multidisciplinary teams of Life Scientists.

Microbial Physiology and Fermentation

The Bioprocess Development Center has a position available for a Principal Investigator in microbial physiology and fermentation. The successful candidate will join a team of enzymologists, molecular biologists and engineers to develop and scale up fermentation processes for production of chemicals. The candidate should have a Ph.D. in microbiology, biochemistry, biochemical engineering or a related field, extensive knowledge of microbial metabolism and experience in fermentation development and quantitative analysis of fermentation.

Please refer to: CRD98-2115A

Bioprocess Development

A position is available with the fermentation group of the Bioprocess Development Center for someone with an interest in research and development of fermentation processes for production of industrial chemicals. The person who fills this position will be responsible for cultivation of microorganisms in flasks and fermenters, fermenter set up and operation, and analysis of samples and results. The candidate should have a B.S. degree in microbiology, biochemistry or a related field, experience in aseptic techniques in cultivation of microorganisms, and familiarity with fermentation and related instrumentation.

Please refer to: CRD98-2126A

A second position is open in the Fermentation Research Facility of the Bioprocess Development Center. The successful candidate who fills this job will provide analytical support for fermentation research studies. The job will include analyzing fermentation samples and communicating the results. This position may require second shift operations. The candidate should have a B.S. degree in chemistry or a related area with additional experience in analytical chemistry, experience in operating and maintaining analytical instruments, familiarity with computer databases and spreadsheet software, and good general mechanical and electronic trouble shooting skills. **Please refer to: CRD98-2126B**

Microbial and Industrial Biotechnology

The Microbial and Industrial Biotechnology group has two Principal Investigator positions available for microbial physiologists. The focus of the group is to discover the enzymes and the genes of new bacterial or fungal biochemical pathways, as well as to engineer new organisms for industrial applications. Candidates should have a Ph.D. in microbiology or a related field, a strong knowledge of microbial diversity and metabolism, and extensive experience in microbial biochemistry using either analytical tools such as HPLC, MS, NMR or molecular genetics methods. Specialists in other forefront approaches to microbiology such as genomics, population microbiology or image analysis will also be considered. **Please refer to: CRD98-2119**

The Microbial and Industrial Biotechnology group has an opening for a support scientist in the research area of identification of novel enzymes and pathways for biocatalysis. Candidates should have a M.S. in microbiology, molecular biology, biochemistry or a related field. Working knowledge of flow cytometry and cell sorting, experience with robotics and automation, and computer programming skills would be highly desirable. This position also requires familiarity with aseptic techniques, growth and maintenance of bacterial cultures, molecular biology techniques, biochemistry and enzymology techniques including operation of analytical instrumentation, light and fluorescent microscopy, image analysis, and familiarity with microbial systematics and phylogeny.

Please refer to CRD98-2115B

Whether you are just starting your career or looking for growth opportunities, we encourage you to apply. We are looking for highly motivated individuals who can become members of our research teams to enhance both our success as well as their own. You will enjoy our state-of-the-art Experimental Station and Glasgow facilities. These positions offer a highly competitive salary and an excellent benefits package. We are located in Wilmington and Glasgow, DE, an area that offers an attractive lifestyle with easy access to all the cultural, academic and recreational activities on the Eastern Seaboard. Qualified candidates should send a resume and three references to: DuPont Human Resources, CRD98#, 1007 Market Street, N12419, Wilmington, DE 19898. We are an equal opportunity employer. Please make reference to the job code when responding.



The quest for success begins with the best

DuPont is a world leader in research in the chemical and biological sciences, including fundamental and applied research programs ranging from industrial bioprocesses for the synthesis of chemicals and materials to genetically improved crops and discovery of crop protection chemicals. We are now seeking Ph.D. Principal Investigators, as well as M.S. and B.S. support staff to join multidisciplinary teams of Life Scientists.

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Please refer to CRD98-2115B

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science & technology

Brings Us Together

ImClone Systems Incorporated is a biopharmaceutical company engaged primarily in the research and development of therapeutic products for the treatment of cancer and cancer-related disorders. As a leading biopharmaceutical company, we bring science and technology together with state-of-the-art systems and the most current technology. We also emphasize innovation, multi-disciplinary problem solving and teamwork. We are seeking qualified candidates in the following areas:

SCIENTIST / Angiogenesis

We are seeking a scientist to study novel molecular mechanisms of blood vessel formation, particularly the role played by VE-cadherin homophilic binding, development of binding antagonists, and testing of antagonists in vitro and in animal models. Experience in monoclonal antibody development, assay development, and animal models would be a plus. Qualified applicants should have a Ph.D. in Immunology, Molecular Biology or related field. **DEPT: 110DHSA**

POSTDOCTORAL / Molecular & Cell Biology

A Postdoctoral position is available for an energetic, highly motivated individual with a recent Ph.D. in molecular biology or related field. Qualified applicants will have expertise in two or more of the following areas: cDNA library construction; antibody/peptide phage display; protein expression in prokaryotic and mammalian cells and purification; viral vector manipulation and cell transfection. Individuals with experience and/or interests in research aimed towards identification and validation of novel targets for cancer therapy are strongly encouraged to apply. **DEPT: 105ZZPD**

SENIOR SCIENTIST / Cell Biology

We are seeking a cell biologist with experience in vascular and/or stem cell biology. Qualified applicants should have a Ph.D. in cell biology, or related field and expertise in both in vitro (including tissue culture) and in vivo techniques. The in vivo techniques should include mouse hematopoietic stem cell re-population modes. An understanding of other animal vascular models is a plus. **DEPT: ENDO1**

SENIOR SCIENTIST / Molecular Biology

We are seeking a molecular biologist with experience in gene therapy approaches. Qualified applicants should have a Ph.D. in molecular biology, or related field with expertise in vector development, including viral vectors. Use of vectors in animal models is a plus. **DEPT: ENDO2**

ImClone Systems Incorporated, an Equal Opportunity Employer, offers competitive salaries and outstanding benefits package including a tuition reimbursement program. For confidential consideration, qualified candidates should

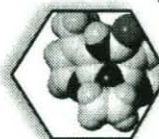
reply by sending/faxing (212-645-2054) their CV with a cover letter and salary requirements, indicating position and DEPT Code to: ImClone System Incorporated, Human Resources Manager, 180 Varick Street, 7th Floor, New York, NY 10014.



Boehringer Ingelheim Pharmaceuticals, Inc.

Bringing A World Of Science

To The World At Large.



Boehringer Ingelheim is the world's largest privately-held pharmaceutical company. From our 300-acre site in Ridgefield, Connecticut, our research, development, manufacturing and sales operations span seven countries on five continents. It is a collaborative effort that is bringing novel new drugs and renewed health to people throughout the world. Due to expansion, we have the following opportunities available:

• Senior Scientist/Cell Biologist

The selected candidate will be responsible for working within a team oriented discovery environment to identify new, immunologically related molecular targets and support existing discovery programs.

The appropriate candidates should possess a Ph.D. in Cell Biology, Immunology, or Molecular Biology with at least 3 years' postdoctoral training in immunologically based research. Applicants should have experience in cell culture and the ability to explore research questions with cell-based approaches and have a solid background in intracellular signal transduction. Experience in project and laboratory management with excellent verbal and written communication skills, the capability to effectively interact with diverse disciplines, and the ability to work in a team environment are also necessary. Previous industrial experience is an asset but not essential. Dept. CP-SJ

• Principal Scientist

Molecular Biologist/Genomics

The successful candidate will conduct innovative research, involving a genomics-based approach to identify and validate novel targets for drug discovery in immunology and inflammation. Responsibilities will also include providing effective scientific and managerial leadership as a laboratory supervisor and functioning effectively in an interactive, interdisciplinary team environment.

A Ph.D. in Molecular Biology or related discipline and 2 or more years' postdoctoral experience are required. Experience in gene cloning and expression in mammalian and other eukaryotic cells as well as in immunology and/or cell biology are necessary. Protein purification and characterization experience and expertise in protein-protein interactions are required combined with good communication and analytical skills. Dept. CP-RB1

Gene Therapy

Our ideal candidate will conduct innovative research identifying, developing and implementing novel gene therapeutic agents for immunological and inflammatory diseases. Additional responsibilities will include providing effective scientific and managerial leadership as a laboratory supervisor and functioning effectively in an interactive, interdisciplinary team environment.

Qualifications include a Ph.D. in Molecular Biology or related discipline and 2 or more years' relevant postdoctoral experience. Knowledge of immune and inflammatory mechanisms is desirable. Experience with gene expression in mammalian cells as well as expertise in vectors for gene delivery in *in vitro/in vivo* are necessary. The individual must also possess good communication, interpersonal and analytical skills. Dept. CP-RB2

Interested candidates, please forward your C.V. to: **Boehringer Ingelheim Pharmaceuticals, Inc., Dept. _____, 900 Ridgebury Rd., P.O. Box 368, Ridgefield, CT 06877-0368; Email: rd.resume@bi-pharm.com.**

We are an equal opportunity employer dedicated to diversity for the value it brings to our work and to our lives M/F/D/V.

<http://www.boehringer-ingelheim.com>



**Boehringer
Ingelheim**



HOWARD HUGHES MEDICAL INSTITUTE

The Howard Hughes Medical Institute conducts biomedical research in the areas of cell biology, genetics, immunology, neuroscience and structural biology at over seventy locations around the United States. HHMI regularly has positions open for research and administrative personnel.

Laboratory Positions:

- Postdoctoral Fellowships
- Research Specialists/
Technicians
- Research Secretaries

Administrative Positions:

- Managers
- Administrative Assistants
- Purchasing Coordinators
- Receiving Clerks

Institute employees enjoy competitive salaries and an excellent benefits package. HHMI is an equal opportunity employer. Please visit our website at www.hhmi.org/jobs for a listing of available positions.



BIOINFORMATICS/COMPUTATIONAL BIOLOGY

The newly established Center for Bioinformatics at the University of Pennsylvania seeks outstanding candidates at all levels for tenure-track faculty positions in bioinformatics and computational biology. Applicants should have demonstrated qualifications in any area of computational biology, including computational genomics, and a commitment to working in a strong interdisciplinary environment involving biologists, computer scientists, mathematicians and statisticians. Successful applicants will participate in an ongoing, dynamic training program in computational biology/bioinformatics at the post-graduate, graduate, masters, and undergraduate levels. Successful candidates will be appointed in a department within the School of Medicine with secondary appointments in other departments (e.g. Computer and Information Science) as appropriate. Applicants should send a full CV, names and addresses of three references, and a statement of research interests to:



**Chair, Search Committee
Center for Bioinformatics
University of Pennsylvania
418 Guardian Dr., Rm. 1313
Phila., Pa 19104-6021**

For additional information, see:
<http://www.pcbi.upenn.edu>

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER



UNC CHARLOTTE

ENDOWED DISTINGUISHED PROFESSORSHIP

The William States Lee College of Engineering seeks qualified candidates for the **Duke Energy Endowed Distinguished Professorship** in the following areas:

- **COMPUTER/COMMUNICATIONS ENGINEERING** with preference in mixed analog/digital design, telecommunications, DSP, digital control of advanced energy systems.
- **COMPUTATIONAL SCIENCE AND ENGINEERING** with preference in computational science, mechanical engineering, aerospace engineering.
- **ENVIRONMENTAL ENGINEERING AND SCIENCE** with preference in air quality, contaminant fate and transport, groundwater hydrology.

Salary commensurate with qualifications, which include a doctoral degree; an established reputation in one of the advertised areas; a demonstrated ability to develop and lead research programs; and possess the ability and willingness to work with colleagues from other disciplines, government agencies, and industry. Endowment provides support for students, travel, equipment, and other activities.

The College has an enrollment of more than 1,600 students and offers baccalaureate and Master's degree programs in Civil, Electrical, and Mechanical Engineering, and Computer Science, and the Ph.D. degree in Electrical & Computer Engineering, Mechanical Engineering, and Information Technology. Ph.D. degrees in Civil Engineering and Computer Science are offered through an interinstitutional program with NCSU.

The C. C. Cameron Applied Research Center provides excellent facilities for research in collaboration with regional business and industrial partners. Primary areas of research currently include material science, precision engineering, optoelectronics, microelectronics, environmental engineering, biotechnology, biomedical engineering, and computer-integrated manufacturing.

UNC Charlotte is one of the largest institutions in the UNC System with more than 16,000 students in the six colleges of Architecture, Arts & Science, Business Administration, Education, Engineering, and Nursing. The campus is located in the University City area adjacent to the University Research Park, which includes such organizations as First Union R&D Corp., IBM, EPRI, Verbatim and AT&T. With a metropolitan population of over one million, Charlotte is the largest city in the Carolinas; is the second largest banking center in the United States; has an international hub airport for USAirways; and offers a host of cultural, educational, and social activities including professional football, basketball, and NASCAR racing.

Duke Energy Corporation is a global energy company with more than \$20 billion in assets and is headquartered in Charlotte. Its companies develop, own, and operate worldwide energy facilities and provide engineering, management, operating, and environmental services.

Forward nominations and applications to **Chairperson, Duke Energy Endowed Distinguished Professorship Search Committee, The William States Lee College of Engineering, UNC Charlotte, 9201 University City Boulevard, Charlotte, NC 28223-0001**. Review of applications will begin June 1, 1998, and continue until filled. *EEO/AA Employer.*

EXTRAORDINARY PEOPLE. EXTRAORDINARY SCIENCE.



The Whitehead Institute/MIT Center for Genome Research has become a world leader in functional genomics, genome mapping, sequencing, and informatics. The Center attracts the brightest scientists to develop and utilize state of the art automated systems for data production and analysis in an exciting and challenging atmosphere.

SCIENTIFIC MANAGER/ RESEARCH SCIENTIST

•To manage the Genome Center's high throughput genotyping facility. The Genome Center is expanding its activities in the genetics of human diseases, including research projects in coronary artery disease, hypertension, asthma, and inflammatory bowel disease. In addition to managing the genotyping facility, which currently uses fluorescent microsatellite genotyping on ABI 377 sequencers, the successful candidate will draw upon the unique strengths of the Genome Center in technology development and bioinformatics to establish a high throughput genotyping system on DNA microchips. Requires a PhD in molecular biology or genetics and/or substantial experience in leading a genotyping group.

SOFTWARE ENGINEER

•To design, implement, and maintain tools and software systems in Perl, C, C++, Java, and other languages, in a Unix and Web-based environment. Programs will be designed in consultation with biologists and computer scientists, and will be implemented in projects for which you will have the primary responsibility. Must be technically flexible and comfortable with rapid prototyping and frequent user interaction in small research teams. Must have coding and system building skills experience in Unix or Windows NT writing software in Perl, C, C++, Java or other languages in addition to excellent written and verbal communication skills, initiative, and problem-solving abilities. Requires a BA/BS in computer science or another field if accompanied by significant programming experience.

SCIENTIFIC PROGRAMMER

•To be responsible for devising and implementing solutions for data analysis and process control needs in project that could include high-throughput physical and genetic mapping, genetics of human disease and next-generation high-throughput functional assay techniques such as DNA chips. Requires BS degree in computer science, biology, chemistry or physics or equivalent experience, and hands-on data analysis, software development, or information system integration in industry or academia, and coursework or prior professional involvement with molecular biology. Must have facility with diverse computing environments including programming ability.

TECHNICAL ASSISTANT/ASSOCIATE

•To work in a team environment engaged in high-throughput genome sequencing. Techniques may include preparation and analysis of DNA by restriction digestions, molecular cloning, PCR, and automated DNA sequencing. Requires BS or MS in Biology or related field with 1-2 years of related experience. Must have extensive molecular biology experience with particular emphasis on DNA sequencing.

We offer excellent salaries, generous benefits (including tuition reimbursement), interaction with MIT community, opportunity to attend scientific lectures, and state-of-the-art research facilities.

Please send resumes to: Whitehead Institute for Biomedical Research, Human Resources Dept., Ref. SCI: 515, Nine Cambridge Center, Cambridge, MA 02142.

Visit our web site at: <http://www.wi.mit.edu>.

Equal Opportunity Employer



WHITEHEAD INSTITUTE

PENNSTATE



College of Medicine

POSTDOCTORAL FELLOW

A position is available at the Weis Center for Research in the Laboratory of Dr. William A. Maltese. The Postdoctoral Fellow will study the processing of Alzheimer's B-amyloid precursor protein in mammalian cells using mutant Rab GTPases to assess the roles of specific intracellular trafficking pathways. For additional information see <http://www.hmc.psu.edu/physio/faculty/maltese.htm>

The successful candidate will have a Ph.D. in cell biology, molecular biology or biochemistry, and be familiar with recombinant DNA techniques, protein expression, cell culture, immunoprecipitation or immunofluorescence. Excellent oral and written communication skills are essential.

The Weis Center is part of the Penn State College of Medicine, providing modern research facilities for 90 faculty and research personnel. The Center is located on the campus of the Geisinger Clinic in Danville, PA. This is a pleasant, semi-rural living environment with convenient access to the major metropolitan areas of New York and Philadelphia.

Interested individuals should send their curriculum vitae and the names and addresses for three references to:

William A. Maltese, Ph.D.

c/o Mrs. Barbara A. Brown

Administrative Assistant

Henry Hood Research Program

Sigfried and Janet Weis Center for Research

100 North Academy Avenue

Danville, PA 17822-2601

For your health, the Weis Center for Research of the Pennsylvania State University is a smoke-free campus. AA/EOE

Department of Energy • Office of Energy Research

Program Notice 98-16; Genome Instrumentation Research Program

The Office of Biological and Environmental Research (BER) of the Office of Energy Research (ER) of the U.S. Department of Energy (DOE), announces its interest in receiving applications in Instrumentation Research supporting the Human Genome Program. Applications are sought from a broad range of scientists with backgrounds in biology, chemistry, physics, and engineering including those not presently involved in the Human Genome Program. Both substantive improvements to current systems and novel and creative new strategies are needed in preparation for the needs of biology in the next century. New instrumentation and technical approaches are sought for DNA sequencing, automation and integration of DNA sequencing systems, validation of DNA sequencing accuracy, and the determination of gene function of newly sequenced DNA. The goals are to reduce costs and increase the throughput while maintaining accuracy for production DNA sequencing and related analyses. The full text of Program Notice 98-16 is <http://www.er.doe.gov/production/grants/grants.html>.

DATES: Potential applicants are encouraged to submit a brief preapplication which should be received by DOE by 4:30 P.M., E.D.T., June 8, 1998. Formal applications, in response to this notice, must be received by 4:30 p.m., E.D.T., August 19, 1998.

FOR FURTHER INFORMATION CONTACT: Charles G. Edmonds, Medical Applications and Biophysical Research Division, ER-73, 19901 Germantown Road, Germantown, MD 20874-1290; telephone: (301) 903-0042; E-mail: charles.edmonds@oer.doe.gov.



We've Made a Big *Impression* in the Fight Against Childhood Disease!

Pasteur Mérieux Connaught is committed to making the world a healthier place. As a leader in the research, development and distribution of human vaccines and biologicals we are proud of the impact we've had in the battle against pediatric and adult diseases. As we carry this fight into the next millenium we seek professionals with the dedication and inventiveness to help us create the "breakthrough" vaccines of tomorrow.

Opportunities are available in Research & Development, Clinical, Regulatory Affairs and Manufacturing for B.S., M.S. and Ph.D. level candidates with a strong scientific background in any of the following areas:

■ **IMMUNOLOGY**
■ **VIROLOGY**
■ **MICROBIOLOGY**
■ **CLINICAL SEROLOGY**

■ **INFECTIOUS DISEASE**
■ **CHEMICAL ENGINEERING**
■ **BIOCHEMICAL ENGINEERING**
■ **INFORMATION SCIENCE**

The ideal candidates will have 3 to 8+ years of significant research experience (industrial &/or academic) in product R&D, technology transfer/scale-up or project management. Specific expertise in vaccine development, purification technology, bacterial fermentation development, analytical assay development, and sterile filling pharmaceutical operations is highly desired.

PMC is located in a campus-like setting in a beautiful area of Northeastern Pennsylvania. As a member of the Rhône-Poulenc Group, we offer an attractive salary/benefits package, a drug-free work environment and ongoing opportunities for continuing education and professional development.

For consideration, please send/fax your resume to: **Pasteur Mérieux Connaught, Dept. SS, Route 611, P.O. Box 187, Swiftwater, PA 18370. FAX: 717-839-0561. Visit our web site www.us.pmc-vacc.com** We are an Equal Opportunity Employer M/F/D/V.

P PASTEUR MÉRIEUX CONNAUGHT

RHÔNE-POULENC GROUP



Progenics

B I O T E C H N O L O G Y O P P O R T U N I T I E S

Progenics Pharmaceuticals, Inc. is a leader in the discovery and development of innovative products for the treatment of cancer and viral diseases. We have collaborations with major pharmaceutical companies as well as leading academic laboratories in the US and Europe, and encourage presentation of scientific advances at meetings and in leading journals. The continued growth of the company has created outstanding opportunities for highly motivated, team-oriented individuals to work in a multidisciplinary environment in the following areas:

DIRECTOR, IMMUNOLOGY

The successful candidate will lead an experienced team in the development of novel vaccines and monoclonal antibodies targeting protein and carbohydrate antigens to treat cancer and viral diseases. For this newly created and challenging position, we seek exceptional candidates who possess a track record of industrial or academic accomplishments, broad experiences in cancer or viral immunology and assay development, excellent communication skills, and supervisory experience. This position requires a Ph.D., 5 years' industrial experience with a strong publication record, and familiarity with cGMPs and FDA regulatory processes.

DIRECTOR, VIROLOGY

The successful candidate will build a team that focuses on developing innovative antiviral agents that target entry and other novel stages of the viral replicative cycle. For this newly created and challenging position, we seek exceptional candidates who possess a track record of industrial or academic accomplishments, excellent communication and supervisory skills, and broad experiences in human virology, cell biology, and in vitro and animal models of viral disease. This position requires a Ph.D. and 5 years' relevant industrial experience with a strong publication record.

SENIOR SCIENTIST, MOLECULAR BIOLOGY AND GENE EXPRESSION

An outstanding opportunity exists for a highly motivated, hands-on scientist with a Ph.D. and 2-4 years' industrial experience in molecular biology, cell line development, and high-level expression of novel recombinant proteins in prokaryotic and eukaryotic systems. The successful candidate will possess a strong record of scientific publications that demonstrate outstanding proficiency in gene isolation, cloning, analysis, engineering, and expression. This individual will play a leadership role in devising and implementing innovative applications of molecular biology to further the Company's ongoing research and development efforts in virology and oncology.

RESEARCH ASSOCIATES

Outstanding individuals are sought who possess a BS/MS degree and significant experience in one or more of the following areas: immunology, molecular and cellular biology, oncology, virology, and cGMP biologics manufacturing.

Progenics offers a highly competitive salary and benefits package and a stimulating, highly interactive research setting that recognizes and rewards achievement. We are situated in a state-of-the-art research facility on an attractive campus in Westchester County, NY, 20 miles north of Manhattan. To apply, please submit a CV, description of your research experiences, and a list of 3 references to: **Human Resources-SCI, Progenics Pharmaceuticals, Inc., P.O. Box 549, Tarrytown, NY 10591. EOE**

THE BAYER FACTS:



Bayer:

A premier healthcare company for the 21st century.

CHEMISTS

■ In the highly competitive global pharmaceutical marketplace, there are many "Bayer Facts" that distinguish us as a leader. To name a few, we are part of Bayer Corporation, a \$32 billion international diversified organization and one of the most broadly-based healthcare companies in the U.S. Our Pharmaceutical Division site in **WEST HAVEN, CT** has worldwide responsibility for the research and development of treatments for osteoporosis; cancer; diabetes and other metabolic disorders.

COMBINATORIAL CHEMISTRY - PH.D

■ We seek a Ph.D. Organic Chemist to conduct pharmaceutical research focusing on molecular design and diversity sciences. Working closely with computational and structural scientists, the successful candidate will be responsible for the design and construction of small molecule diversity libraries to support lead discovery as well as lead optimization. The ideal candidate will have at least 2 years of medicinal chemistry experience within the pharmaceutical industry with a strong emphasis on organic synthesis. Research experience in solid phase organic synthesis is highly desirable. Excellent communication skills coupled with the desire to contribute to a multi-disciplinary drug discovery team are essential. Please refer to Position RS/BC on resume.

COMBINATORIAL CHEMISTRY - BS/MS

■ We seek a self-motivated, creative BS/MS Organic Chemist with experience in solid phase organic synthesis. Working within a multi-disciplinary project team you will develop and apply new synthetic methodology for the construction of diversity libraries to assist in the identification of new therapeutic agents. Candidates must have a Bachelor's degree with 4 or more years of qualifying experience, or a Master's degree with 2 or more years of qualifying experience, preferably in the pharmaceutical industry. The ideal candidate will have at least 2 years of research experience in combinatorial chemistry, and a thorough knowledge of modern chromatographic and spectroscopic techniques. Please refer to Position RA/BC on resume.

COMPUTATIONAL CHEMISTRY/ MOLECULAR MODELING - PH.D

■ We are looking for a self-motivated, creative individual with excellent interpersonal skills who can apply modern computational chemistry techniques to drive drug discovery and small molecule design. Responsibilities include providing molecular modeling research and support for drug discovery programs, updating molecular modeling resources including hardware and software, and establishing and evaluating novel computational methods for drug discovery. The ideal candidate will possess a Ph.D. (or equivalent) in computational chemistry, physical organic, organic chemistry or theoretical chemistry, with 2 or more years of proven experience, preferably in the pharmaceutical industry. Hands-on experience in the following areas is required: QSAR, diversity analysis, library design, data mining, structure-based design, and knowledge of commercial modeling software packages. Experience in database management and programming is desirable. Please refer to Position RS/CC on resume.

■ Please forward your resume including salary history to: **Bayer Corporation, Pharmaceutical Division, Department LM, 400 Morgan Lane, West Haven, CT 06516.** No agencies or phone calls please. To review additional opportunities in Chemistry at the Bayer Research Center, please visit the employment opportunities website at www.career mosaic.com/cm/bayer/

■ An Equal Opportunity Employer M/F/D/V. Bayer Corp. is committed to enhancing and maintaining cultural diversity within our work environment.



**Pharmaceutical
Division**

Postdoctoral Fellowships

The UNC Lineberger Comprehensive Cancer Center of the University of North Carolina at Chapel Hill will have openings in 1997-98 in its training program, now in its 23rd year, for persons completing graduate studies to train with excellent investigators in basic research in tumor virology, molecular carcinogenesis, molecular therapeutics, cancer cell biology, genetics, tumor immunology, and research that interfaces with clinical and physical sciences. Training is available in DNA repair, replication, and mutagenesis; regulation of cellular proliferation and differentiation including growth factors, signal transduction pathways, and intercellular communication; molecular immunology; molecular genetics and epidemiology of cancer; and human disease models and gene therapy. Unique training resources and core facilities are supported by the NCI-designated UNC Lineberger Comprehensive Cancer Center.

Preceptors are: **Steven Bachenheimer, Albert Baldwin, Victoria Bautch, David Brenner, Keith Burrage, Sharon Campbell, Stephen Chaney, David Clemmons, Edward Collins, Marila Cordeiro-Stone, Channing Der, Robert Duronio, H. Shelton Earp, Jeffrey Frelinger, Frank French, Jack Griffith, Stephen Haskill, Brian Herman, Eng-Shang Huang, Clyde Hutchinson III, Kenneth Jacobson, Rudolph Juliano, David Kaufman, Shannon Kenney, Ryszard Kole, Steven Leadon, David Lee, Patricia Maness-Tidwell, William Marzluff, Beverly Mitchell, Joseph Pagano, Tom Petes, Mark Peifer, Nancy Raab-Traub, James Raleigh, R. Jude Samulski, Aziz Sancar, Ronald Swanstorm, Lishan Su, Jenny Ting, Ronald Thurman, Michael Topal, Terry Van Dyke, Jean-Michel Vos, Kevin Weeks, Bernard Weissman, Elizabeth Wilson, and Yue Xiong.**

Candidates must be U.S. citizens or permanent residents. For an informational brochure or to apply (include curriculum vitae, three letters of recommendation, a statement of research interests, and graduate school records) write to:

**Joseph S. Pagano, M.D.
CB# 7295**

**UNC Lineberger Comprehensive Cancer Center
School of Medicine
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7295**

UNC's Comprehensive Cancer Center is an Affirmative Action/Equal Opportunity Employer. Minority applicants are encouraged to identify themselves voluntarily.

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Qualified candidates will have a Ph. D in Biochemistry or a related field with a min. of 5 yrs. biotech industry exp. Specific exp. in protein/polysaccharide downstream process development/scale up, column chromatography, ultrafiltration, and HPLC/FPLC is essential. Working knowledge of chemical/immunological assay development and cGMP manufacturing is desirable. Excellent verbal and written communication skills are required.

We are located between Washington, DC and Baltimore, MD and offer competitive salaries and benefits. Interested individuals should send a curriculum vitae or resume indicating position #645-M to:

**North American Vaccine, Inc.
Attn: Human Resource Manager
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Beltsville, MD 20705-4223
FAX (301) 470-6021
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The Jackson Laboratory: a unique research environment with unparalleled mouse resources.

Letters of inquiry should include: curriculum vitae, statement of research interests, list of publications, and names of three references. (Predoctoral program is in conjunction with the University of Maine.)

To apply or request further information, contact: **Suzanne Serreze, The Jackson Laboratory, 600 Main St., Bar Harbor, ME 04609-1500. Phone: 207/288-6420; FAX: 207/288-6079; e-mail: sbs@jax.org; website: <http://www.jax.org>. EE/AA Employer.**

ASSOCIATE CHIEF OF RESEARCH

RADIATION EFFECTS RESEARCH FOUNDATION HIROSHIMA, JAPAN

The U.S. National Academy of Sciences (NAS) is seeking a Resident Associate Chief of Research for the Radiation Effects Research Foundation (RERF) in Hiroshima, Japan. RERF is a cooperative US-Japan research foundation with approximately 290 employees in laboratories in Hiroshima and Nagasaki, Japan. The Foundation is funded by the Government of Japan, through the Ministry of Health and Welfare, and by the U.S. Government, through the NAS with funds from the Department of Energy (DoE). RERF is managed by citizens of the two countries. The position of Associate Chief of Research is a senior leadership position with responsibility to assist in the direction of the research activities conducted at RERF on the long-term follow-up of late health effects among the survivors of the atomic bombs. The Associate Chief of Research assists three RERF Directors, all of whom live in Japan, in the day-to-day management of the Foundation.

Qualified candidates for this position must be U.S. citizens and have an M.D. or Ph.D. with extensive experience in basic research (genetics, molecular biology, cellular biology, epidemiology, immunology, etc.) and management of multidisciplinary research programs. The Associate Chief of Research is an employee of the United States National Academy of Sciences and RERF. The salary will be commensurate with experience and will be supplemented by relocation, housing, and cost-of-living benefits. Typical NAS appointments are for two years with possible reappointment.

Please send your resume and the names and addresses of at least three references to: **Dr. Evan B. Douple, Board on Radiation Effects Research, (NAS 342-ED), National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418; or via e-mail: edouple@nas.edu; or via fax: (202) 334-1639; EOE. Visit us at: WWW.NAS.EDU.**



National Institutes of Health
National Institute on Deafness and Other Communication Disorders
Bethesda, Maryland

DIRECTOR, DIVISION OF INTRAMURAL RESEARCH

Closing Date: June 19, 1998

(All applications must be post-marked by the closing date.)

The National Institute on Deafness and Other Communication Disorders (NIDCD) is recruiting for the position of Director, Division of Intramural Research (DIR). The Director, DIR, directs a program of multi-disciplinary fundamental and clinical research for the NIDCD. The Director, DIR, serves as the principal advisor to the Institute Director on biomedical and scientific affairs involving the intramural research programs conducted by basic and clinical research investigators in the field of hearing, balance, smell, taste, voice, speech and language. The Director, DIR, will plan and conduct an independent research program that contributes to new knowledge in one or more of these areas.

Candidates for this position must have a M.D. or Ph.D., with extensive professional research experience in one or more of the areas of research that has or will contribute to molecular, cellular or genetic research on the normal processes and disorders of hearing, balance, smell, taste, voice, speech and language.

Salary may range from \$77,798 to \$151,800 per year and additional compensation may be authorized depending on individual's qualifications.

Further information about the position and qualification requirements may be obtained from <http://www.nih.gov/nidcd> or by contacting Ms. Christine Clements at (301) 402-0508 (Voice or TTY) or TTY (301) 402-1134. *Applicants are required to submit a Bibliography and either a Curriculum Vitae, Application for Federal Employment (SF 171), Optional Application for Federal Employment (OF 612), Resume or any other written format to: Ms. Christine A. Clements, Personnel Management Specialist, NIDCD, National Institutes of Health, 31 Center Drive, MSC 2320, Bethesda, Maryland 20892-2320; E-mail: ClementsC@ms.nidcd.nih.gov*

Additional information may be obtained from: Dr. Story C. Landis, Chairperson, NIDCD Search Committee for Director, Division of Intramural Research, NIDCD; (301) 435-2232; E-mail: SI122c@nih.gov

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Section on Murine Genetics Laboratory of Molecular Genetics



Positions are available immediately in The Section on Murine Genetics, Laboratory of Molecular Genetics (LMG), National Institute on Deafness and Other Communication Disorders (NIDCD) to study the genetics and biology of hearing defects in mice. We are seeking scientists (Ph.D. and/or M.D.) interested in using the mouse model combined with molecular genetics, functional hearing tests, anatomy or molecular biology to study the development and function of the mammalian inner ear. Research projects include the identification and characterization of the hearing susceptibility gene *mdfw*. For references, see Noben-Trauth et al., 1997, *Genomics* 44, 266-272.

Please send your CV, bibliography, description of your research interests and names of three references to:

Dr. Konrad Noben-Trauth, National Institute on Deafness and Other Communication Disorders, 5 Research Court, Rockville, MD 20850, or by e-mail to: kntrauth@pop.nidcd.nih.gov

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

MOLECULAR/YEAST BIOLOGY

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

DRUG DISCOVERY/CELL BIOLOGY

CODE: S-DD BS/MS scientists with a minimum of 1 year laboratory experience with strong background in molecular biology, mammalian cell culture, and receptor signal transduction research. Previous experience in molecular target-based drug discovery is also desirable. Qualified individuals will work within the drug discovery group exploring cellular signaling pathways and designing/implementing secondary assay systems to analyze potential therapeutics.

GENOMICS

CODE: S-G BS/MS scientists with a minimum of 1 year experience or Ph.D. scientists with minimum 2 years post doctoral experience in molecular biology and cloning full length cDNA. Experience in cloning vector construction, isolation of cDNAs from large genomic clones or degenerate PCR methodologies is desirable.

MAMMALIAN CELL BIOLOGY

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

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

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PROFESSOR OF RADIOLOGY AND DIRECTOR OF THE HUMAN 3T MR SYSTEM

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DEACONESS MEDICAL CENTER, BOSTON

The Beth Israel Deaconess Medical Center and Harvard Medical School seek an academic radiologist to serve as Director of the Human 3T MR System in the Department of Radiology and as Professor of Radiology at Harvard Medical School. Candidates for this position will be responsible for leadership in all facets of this field, including research, teaching and applications to clinical care. Candidates should have a strong record of research accomplishment in clinical spectroscopy, an ability to lead an interdisciplinary program, and be willing to contribute to biomedical education.

Interested individuals should send their current CV to:

Herbert Kressel, M.D.
Miriam H. Stoneman
*Professor of Radiology,
Chairman of Search Committee
Department of Radiology
Beth Israel Deaconess Medical Center
330 Brookline Avenue
Boston, MA 02215*

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Deaconess Medical Center are equal
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GENE LOGIC INC.

Job Description: Scientific Director

Gene Logic Inc. uses a proprietary system, based on analysis of gene expression and gene regulation, designed to accelerate the discovery of drug targets and drug leads. The company's objective is to provide its pharmaceutical company Alliance partners with novel drug targets, drug leads, and a suite of genomic database products to reduce time, cost, and risk associated with drug discovery.

The incumbent will coordinate and direct all aspects of Gene Logic Alliance team's performance of the scientific research plan, ensuring that deliverables are fulfilled in a timely manner according to the contractual agreement and associated timelines. The Alliance team includes scientific, production, and bioinformatics staff. The incumbent will be the main scientific contact to the Alliance partner and will play a key role in planning and decision-making to meet the scientific objectives and deliverables. The incumbent will exercise judgement in selecting the methods, techniques, and criteria for meeting or exceeding the Alliance's objectives in a timely manner. The incumbent will also assist in generating and managing budgets, capital resources, and manpower, including the hiring, training, and development of qualified staff. The incumbent will facilitate the flow of information among team members, as well as to Gene Logic's Senior Management and the Alliance partner and will take a leading role in the analysis of data generated by GLGC as well as in the preparation of written progress reports and periodic presentations to the Alliance's Research Management Committee.

The position requires a Ph.D. in a relevant scientific discipline, and candidates must possess significant technical expertise in molecular biology. Expertise in bioinformatics and/or cellular biology optional but preferred. Preferably, candidates should have broad-based biomedical experience, and a thorough understanding of the field of genomics-based drug discovery. The candidate must also have at least 3-5 years experience in managing scientific projects, preferably in or working with the pharmaceutical/biotechnical industry.

Gene Logic Inc. offers a highly competitive compensation and benefit plan, stock options, and a challenging, team-oriented environment. *Gene Logic Inc. is an Equal Opportunity Employer.* For prompt confidential consideration, please send your résumé to:

Gene Logic Inc., 708 Quince Orchard Rd., Gaithersburg, MD 20878

ATTN: Human Resources

Fax Number: (301) 987-1805; E-mail: hr@genelogic.com



The University of Florida, College of Medicine seeks a Director for the University of Florida Cancer Center. Candidates should have an M.D. or M.D./Ph.D. degree with a nationally recognized record of research achievement and administrative experience in oncology. The Director will lead the design and implement multidisciplinary research, education, and clinical programs in oncology and related disciplines on the Gainesville and Jacksonville campuses; recruit faculty and staff to enhance new and current research and clinical programs; and expand extramural funding for center support. The Director will hold a tenure-accruing faculty position in the appropriate department of the College of Medicine. Academic rank and salary will be commensurate with experience.

Letters of application should include a curriculum vitae with a brief summary of relevant research, clinical, and administrative experience and the names of three or more references. Applications should be sent to: **Douglas J. Barrett, M.D., Search Committee Chairman, Cancer Center Director, Box 100296, University of Florida, Gainesville, FL 32610.** The application deadline will be June 30, 1998. Anticipated start date on or after October 1, 1998.

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Lab Head

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is a leader in the research and development of human gene therapy products, for the treatment of genetic and acquired diseases. Founded in 1986, GTI and its collaborators represent one of the largest groups of scientists dedicated to research and development in the field.

We are seeking a Lab Head II to lead scientific activities in a gene therapy approach to the control of graft versus host disease, following allogeneic bone marrow transplantation. Responsibilities will include supervision of a staff of scientists, coordination of internal and external research activities, and participation in an international project team. Position requires a Ph.D. in a scientific discipline and eight to ten years of relevant experience with seven years in a leadership or supervisory role. A scientific background in cellular immunology and in vivo models of transplantation is required; experience in molecular biology and gene therapy are preferred. The successful candidate should demonstrate strong scientific project management and team building capabilities as well as excellent communication skills. (Job Code: 267-051-7)

GTI, a Novartis company, offers a stimulating and challenging environment in a rapidly growing company, with competitive salaries and benefits. Please specify job code when applying. Fax or send resume to:
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Fax: (301) 208-2481,
Email: gti.jobs@pharma.novartis.com.

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Head of Advanced Measurement Science Optics and Imaging

We are currently searching for a key scientist recognized for possessing vision in the field of optics and imaging to further Unilever's ongoing efforts in advanced measurement science. This position will provide scientific leadership at our R&D facility in England and then have increasing management responsibility for our U.S. Imaging Department based in Edgewater, NJ. It will initially require a temporary assignment in England before leadership of the U.S. group is assumed.

Applicants should possess a PhD and be recognized for original published research in the use and design of measurement and imaging systems. Experience in biological systems and biomedical imaging is an advantage. Responsibilities will include the development of new methodologies in electron, scanning probe, confocal and 2-photon microscopies, optical spectroscopy and fluorescence imaging. Using latest generation optical imaging instruments, candidates must be skilled in computer graphics and data analysis and visualization techniques to interrogate and extract value from large and complex data sets. In collaboration with other key scientists and research category management, new knowledge gained from these studies will be used to define research agendas and clinical research efforts making this a highly visible position. For this reason, we seek an initiator and catalyst who thrives on change and challenge.



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As an international leader, Unilever offers a competitive compensation package and a comprehensive benefits and relocation program. For consideration, please forward a full C.V. including publications to: Human Resources Dept. SCI, Unilever Research U.S., 45 River Road, Edgewater, NJ 07020 or E-Mail: job.mca@unilever.com. Visit our web site at <http://www.unilever.com>. Unilever is an Equal Opportunity Employer m/f/d/v.

POSTDOCTORAL POSITION SIGNAL TRANSDUCTION in *S.aureus*

A postdoctoral position is available to study signal transduction in *S. aureus* at the University of Wisconsin, Madison. The production of toxic shock syndrome toxin is reduced by the presence of glycerol monolaurate. This appears to be due to changes in signal transduction. The goal of this project is to define how surfactants alter signaling in *S. aureus*. Molecular genetic, biochemical, and microbiological approaches will be used. The successful candidate will have training in biochemistry and some experience with molecular genetic approaches. The position is anticipated to extend for two years.

Contact Prof. Richard A. Proctor,
Dept of Medical Microbiology and
Immunology, 407 SMI, 1300
University Ave., Madison, WI
53706. (608/263-5591). e-mail:
rap@macc.wisc.edu EOE.

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Trace Residue Chemist

Applicants should have an M.S. or Ph.D. degree in Analytical Chemistry, Biochemistry, or a related field or a B.S. degree with relevant professional experience. A background in trace residue analysis, utilizing state-of-the-art analytical techniques (GC/MS, LC/MS, immunoassay) is desirable. Experience with data management systems (LIMS), GLPs, laboratory automation and DNA and protein analysis is also desirable. Department Code: **ACGGEC-1**

Environmental Chemist

Applicants should have a B.S., M.S. or Ph.D. degree in Analytical Chemistry, Organic Chemistry, Physical Chemistry, Soil Microbiology, Soil Chemistry, or a related field. A background or strong interest in soil, plant or animal metabolism or environmental fate laboratory studies is desirable. Department Code: **ACGGEC-2**

Environmental Scientist

Applicants should have an M.S. or Ph.D. degree in Soil Physics, Chemistry, Chemical Engineering, or a related field or a B.S. degree with a minimum of 5 years of relevant professional experience. A background or strong interest in environmental fate field studies or fate and exposure modeling is desirable. Department Code: **ACGGEC-3**



Ph.D. Synthetic Organic/Medicinal Chemists

Qualified candidates must have a Ph.D. in Organic/Medicinal Chemistry with a strong background in organic synthesis. Experience in the areas of natural product synthesis, heterocyclic chemistry, computational chemistry, and combinatorial chemistry is desirable. Working in an interdisciplinary team environment, successful candidates will be responsible for the design and synthesis of novel organic compounds for crop protection against disease, insects, and weeds. Department Code: **RDIM-4**

B.S./M.S. Synthetic Organic Chemists

Qualified candidates should have a B.S. or M.S. degree in Organic Chemistry with 2+ years of experience in the multi-step synthesis of organic molecules. A working knowledge of organic synthesis and experience with modern chromatographic and spectroscopic techniques are essential. Candidates will be part of a team responsible for defining the biological activity of novel areas of chemistry. Department Code: **GRIM-5**

Math Modeling Scientist/Engineer

This key position requires an M.S., a Ph.D., or extensive relevant industrial experience. Proven expertise in planning, optimization or simulation is essential. One to three years of experience in applied statistics is preferred. Department Code: **GAMMA-6**

A track record of technical excellence, highly effective communication, **teamwork**, interpersonal skills, and demonstrated leadership is essential for these positions.



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With over ten years of experience in cutting-edge research in plant and microbial genetic manipulation and the recent acquisition of a majority ownership position in Mycogen Corporation, our biotechnology program is poised for substantial growth. Dow AgroSciences' unique research effort offers that hard-to-find balance of entrepreneurial opportunity and long-term stability. It's a powerful combination that attracts innovative and ambitious research professionals to our state-of-the-art labs and research campus in Indianapolis.

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Protein Biochemists

Positions at Ph.D., B.S., and M.S. levels will be responsible for research in protein isolation and characterization, manipulation of plant metabolic pathways, the newly evolving field of proteomics, and antibody-based development. Successful candidates will work as part of highly motivated teams in our exceptionally well equipped biochemistry group. Department Code: **BPGB-1**

Microbiologists

B.S. and M.S. scientists will join our microbial screening group that is involved in identifying novel enzymes and protein actives targeted against crop pests and diseases. These positions are part of an ongoing general increase in microbiological research at Dow AgroSciences. Department Code: **BPGB-2**

Molecular Biologists

New staff at the Ph.D., M.S., and B.S. levels are required to augment current efforts in the cloning and expression of novel genes, DNA synthesis and sequencing, high throughput analysis, automation and data management, and the analysis of transgenic plants. These scientists will join long term research projects aimed at discovering and exploiting novel genes in important crop species. Department Code: **BPGB-3**



Plant Cell Biologists

With major focus expanding to include new crop targets, the Cell Biology and Transformation Group will be adding scientists at the Ph.D., M.S., and B.S. levels. They will perform research on gene transfer and high efficiency transgenic plant production systems in corn, rice, canola, sunflower, and other globally important crops. Department Code: **BPGGT-4**

Trait Introgression Scientists

With a major commitment to rapid development of transgenic plant products, the biotechnology program will be adding experts at the Ph.D. and M.S. levels in all areas of molecular mapping and probe development, statistical genetics, genomics, and high throughput analytical systems that accelerate trait introgression and breeding. These scientists will work in Dow AgroSciences' new biotechnology product development group. Department Code: **BPGGT-5**

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Human Resources Recruiting
(please indicate Department Code)
9330 Zionsville Road
Indianapolis, IN 46268-1054

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CHEMINFORMATICS SCIENTIST

Pharmacia & Upjohn is among the world's largest pharmaceutical companies. We are research-based and pharmaceutically oriented, working in areas such as Oncology and Infectious, Metabolic, and Central Nervous System diseases. In each of these areas, our objective is the same: to help people live longer and fuller lives.

The Computer-Aided Drug Discovery unit is seeking a talented Cheminformatics Scientist to develop and support a variety of software methods related to combinatorial chemistry and chemical structure/biological data handling. Responsibilities include application of combinatorial chemistry software methods in compound library design, structure-activity analysis, collaboration with medicinal chemists in library design, end-user training in the application of such methods, and integration of new cheminformatics methods with current database systems that are used for compound registry and analysis.

The successful candidate will have a Bachelor's, Master's, or Ph. D. in Chemistry, Computer Science, or related field. Demonstrated experience in software methods development for cheminformatics applications, familiarity with SQL, and programming experience in UNIX or NT environments are essential. In addition, a

working knowledge of C++ or Visual Basic, experience in the development of large-scale multi-user software systems, and experience with combinatorial chemistry design methods are highly desirable. Computer-Aided Drug Discovery is a multi-disciplinary unit that offers a stimulating scientific environment with significant opportunities for interaction with scientists from diverse backgrounds.

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Pharmacia & Upjohn

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The Wistar Institute has three positions available:

#1) Develop and apply new methods for analyzing complete protein profiles (proteomes) in cancer cells to identify critical proteins that define tumor phenotypes and/or will lead to development of improved diagnostic reagents. Approaches will include 2D PAGE, image analysis, HPLC, in situ protease digestion, and mass spectrometry. #2) Structure-function of cell-cell adhesion proteins implicated in human melanoma and colon carcinoma. Approaches involve recombinant protein mutagenesis strategies coupled with biochemical, biophysical, and cell transfection analyses. Experience with molecular biology, mammalian cell culture, and protein purification/characterization methods preferred. #3) Structure-function of the membrane skeleton protein spectrin, using recombinant peptides, calorimetry, analytical ultracentrifugation, and other biophysical methods. Experience with analytical ultracentrifugation, calorimetry, and protein purification preferred.

Applicants should send a C.V., E-mail address, and names of 3 references, indicating position of interest, to: **Dr. David W. Speicher, The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104.** The Wistar Institute, an independent non-profit research organization located on the campus of the University of Pennsylvania, is an Equal Opportunity/Affirmative Action Employer, M/F/D/V.



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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 for our ever-changing planet. After all, the world's resources are finite, but our vision for the future is limitless. Our Ag sector, located in St. Louis currently has the following opportunity for individuals to join our organization:

RESEARCH TECHNICIAN

You will be responsible for large-scale production of transgenic cotton, potato, corn, or wheat plants. An A.A., B.S., or M.S. in Life Sciences or related field, or equivalent experience is required. Preference will be given to individuals with significant laboratory experience in plant transformation and/or plant tissue culture. Contribution to R&D efforts will vary according to team needs. The successful individual will have excellent communication, laboratory and PC skills, as well as work well within a team-based research environment. **Job Code: RT**

PLANT TRANSFORMATION SPECIALIST

You will be responsible for increasing efficiency of genotype-independent regeneration methods for Agrobacterium-based transformation of cotton. An M.S. or Ph.D. in Life Sciences or a related field, or equivalent experience is required, as well as significant experience in Agrobacterium-mediated plant transformation and plant tissue culture. The successful individual will have excellent communication, laboratory and PC skills; work well within a team-based research environment; and possess a demonstrated ability to design experiments and work independently. **Job Code: PTS**

We offer market salaries and excellent benefits including tuition reimbursement, matching 401(k) programs, incentives based on company performance and success sharing programs! For consideration, please forward your resume and names/addresses of at least 3 references to: **Monsanto Company, Attn: B. Rhodes, Job Code: (select from above), 700 Chesterfield Pkwy. North, St. Louis, MO 63198.** EEO/AA Employer M/F/D/V. Please visit our website at www.monsanto.com.

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BIOINFORMATICS POSTDOCTORAL OPPORTUNITIES

Two bioinformatics postdoctoral positions are available to develop and apply statistical and algorithmic methods for sequence-based prediction of protein function.

The first position involves development of multiple sequence alignment and structural models of protein domains using genetic algorithms, Gibbs sampling, hidden Markov model, and other methods. Applicants should have a background in statistics, computer science, or a related discipline with some knowledge of biochemistry.

The second position involves the application of these and other methods to the analysis of protein families. Applicants for this position should possess a broad understanding of molecular biology and be familiar with using sequence analysis programs in a Unix environment.

Send CV and three letters of recommendation to:
Human Resources Department BPD,



Cold Spring Harbor Laboratory
One Bungtown Road
Cold Spring Harbor, NY 11724
(jobline@cshl.org)

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INNOVATIVE RESEARCH SCIENTISTS

Battelle, a world leader in the development, application, and management of evolving or state-of-the-art technologies, is seeking experienced individuals to join dynamic teams in Biotechnology and Pulmonary Drug Development. These positions require well founded scientific research training, innovative thought processes, excellent verbal and written communication skills, and the ability to work on multiple tasks as part of a team. **The Post-Doctoral positions are being offered for two to three years, contingent upon continued funding.**

POST-DOCTORAL PROTEIN BIOCHEMISTRY - Requires a Ph.D. in chemistry, biochemistry, or a related field with expertise in protein and peptide chemistry. Experience in protein stabilization and protein-protein interactions is desired. Salary range is \$35,000 - \$45,000 based on qualifications.

POST-DOCTORAL PULMONARY THERAPEUTIC SCIENTIST - Requires a Ph.D. in pharmacology, toxicology, biomedical engineering or a related field with demonstrated experience in respiratory physiology, inhalation drug delivery, or the pharmacology of pharmaceuticals products delivered by the pulmonary route. Salary range is \$35,000 - \$45,000 based on qualifications.

MOLECULAR BIOLOGY SCIENTISTS & SENIOR SCIENTISTS (Full-time) - Requires a Ph.D. in Molecular Biology, Microbiology, Biochemistry or related field with expertise in the development of nucleic acid technology for the detection of microbes including pathogens, the development of technologies for antigen detection and experience with clinical laboratory practices. Work involves multidisciplinary team. The Senior Scientists position requires excellent program management skills.

IMMUNOLOGY SENIOR SCIENTISTS (Full-time) - Requires a Ph.D. in Immunology, Biochemistry or related field with additional experience (post-doctoral and/or industrial). Work with multidisciplinary team to develop innovative advances in the area of diagnostics and analytics. Will work with market teams to identify new programs/products and have responsibility for executing strategy for new technology development.

Battelle offers a comprehensive package of compensation and benefits, as well as opportunities for professional challenge and development. Submit a resume and cover letter to: **Battelle, Dept. N112, 505 King Avenue, Columbus, OH 43201-2693. (www.Battelle.org)**. Battelle is an Affirmative Action/Equal Opportunity Employer M/F/D/V.



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MOLECULAR BIOLOGY

Molecular Biologist II

Ph.D. with 3+ years of postdoctoral experience in the mechanisms of nuclear hormone receptor action to contribute to the identification and characterization of steroid hormone receptor co-activators. You will champion an effort to determine the role of novel cDNAs in hormone receptor activity with the goal of developing novel therapeutic targets. Experience with nuclear hormone receptor transcription is required. **Position #OPSCI-2614**

Neuroscientist

Ph.D. with 3+ years of postdoctoral experience in the cellular and molecular biology of CNS disorders to contribute to studies involving the mechanism of action of estrogen in the brain. As a member of a team, you will identify and establish in vitro models of estrogen action in the CNS and utilize these models to determine the cellular and molecular mechanisms involved. A proven ability to establish in vitro CNS model systems and an interest in estrogens are required. **Position #OPSCI-2992**

Cell Biologist

B.S./M.S. with 5+ years of experience in culturing primary neurons from the central nervous system to contribute to studies involving the mechanism of action of estrogen in the brain. As a member of a team, you will be responsible for establishing in vitro models of estrogen action in the CNS and performing various cellular and molecular assays to determine the mechanisms involved. **Position #OPSCI-2998**

Molecular Biologist

B.S./M.S. with 2+ years of experience in the nervous system to contribute to studies involving the mechanism of action of estrogen in the brain. As a member of a team, you will perform various molecular and cellular assays, including subcloning, Northern blotting, Western blotting, ELISA and transfections. **Position #OPSCI-3002**

Princeton, New Jersey Research Scientist, Yeast Genetics CNS Disorders

M.S. and minimum of 5 years postgraduate experience including experience in an industrial environment. Extensive experience using yeast as a model organism for the functional characterization of mammalian genes and knowledge of molecular biology techniques including DNA manipulations, protein analysis and bioinformatic tools required. **Position #OPSCI-2687**

This is your opportunity to join Wyeth-Ayerst Research, a major division of Fortune 100 American Home Products Corporation and a global leader in pharmaceutical research and development. We have the following opportunities in both Drug Discovery and the Women's Health Research Institute at our Radnor, Pennsylvania research facility.

FUNCTIONAL MORPHOLOGY

Principal Research Scientist

Ph.D./M.D. in Neuroscience, Molecular Biology or Cell Biology and 8+ years postdoctoral experience in CNS research. Candidate will be responsible for the development of in vitro and in vivo models for studying the mechanism of and therapeutic possibilities for neuroprotection and hot flushes. **Position #OPSCI-2858**

BONE BIOLOGY

Senior Research Scientist II, Ph.D.

Characterize mechanisms involved in osteogenesis. Develop research strategies utilizing extensive available core biotechnology and genomic support. Strong background in the cellular and molecular biology of the osteoblast and a specific interest in the processes governing bone formation required. **Position #OPSCI-1773**

Senior Research Scientist, Ph.D.

Evaluate the role of novel gene products in regulating bone physiology and validating new mechanisms as drug discovery targets. Design/implement experimental assays, models, and procedures used to develop drug candidates. **Position #OPSCI-2662**

Wyeth-Ayerst offers a competitive salary and benefit package along with one of the best employee stock option programs in the pharmaceutical industry. Please send your resume with salary requirements to:

Wyeth-Ayerst Research

Human Resources Department

Position #, P.O. Box 7886

Philadelphia, PA 19101-7886

or fax to: (610) 989-4854

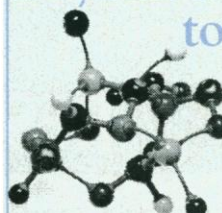
E-mail: jobs@RAMAIL1.wyeth.com

(ASCII format, no attachments, subject: resume)

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Hoechst Marion Roussel, a major player in the global pharmaceutical industry, is committed to building a world-class team of scientists dedicated to Drug Innovation and Approval. Our new state-of-the-art \$45 million facility has doubled our US research capabilities. Our CNS Diseases research division, based in Bridgewater, New Jersey, is focusing a significant portion of its efforts in the area of neurodegeneration. We currently have several promising compounds in the pre-clinical phase of drug development. In order to continue our advances in this field, we currently are seeking additional talented scientists to support our efforts with respect to drug innovation.

BS/MS Behavioral Pharmacology Associate

Requirements include a BS/MS in Biology or related equivalent discipline and a minimum of 5 years of experience in the field of behavioral pharmacology, either in a pharmaceutical or academic setting is essential. Key competencies include experience in all aspects of animal handling of rodents (including injections and surgical techniques); experience with primates highly desirable. In addition, a basic knowledge of computers, a working knowledge of experimental design, interpretation and presentation of results is essential. The associate must have the ability to work semi-independently in initiating and maintaining routine drug screening as well as research projects. Additional competencies such as a basic knowledge of brain histology, neuroimmunology, molecular biology or microdialysis would be advantageous.

BS/MS Neurobiology Associate

Candidates should have a B.S. or M.S. in Pharmacology, Biochemistry or Biology. Small animal surgical experience (vascular; stereotaxic; surgery under a dissecting microscope) is required. Experience in many aspects of rodent handling, including injections of drugs and use of behavioral assays, also is necessary. Other key competencies include some knowledge of histology and neuroanatomy.

BS/MS Biochemist/Cell Biologist

Requirements include a BS/MS degree in the Biological Sciences, a strong experimental background in Molecular Biology and Biochemistry, and 2-4 years work experience in an industrial or academic research laboratory. Proficiency with second messenger, radioreceptor and enzyme assays is desired. Experience with laboratory robotics would be an asset.

Attracting and retaining top talent is a high priority at Hoechst Marion Roussel. That is why we offer one of the most outstanding and comprehensive compensation and benefits packages in the pharmaceutical industry. Our total rewards package includes competitive compensation and bonus programs, flexible medical and dental plans, tuition assistance, income protection plans, and generous retirement plans that have been cited as the best in the industry. For consideration or mail your resume (suitable for scanning) including salary history/requirements, to: **Staffing Manager, D-103H, Ref #1998BW0012, Hoechst Marion Roussel, Routes 202-206, P.O. Box 6800, Bridgewater, New Jersey 08807-0800, U.S.A., or e-mail: jobs@hmri.com.** For additional company information, we invite you to visit our website: www.hmri.com. An affirmative action employer M/F/D/V.

Hoechst Marion Roussel



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Our Respiratory Disease Group, based in Bridgewater, New Jersey, is focusing its efforts in the area of the pathophysiology, genomics and novel pharmacotherapy of bronchial asthma. We currently have several promising compounds in the preclinical phase of drug development. We currently are seeking talented scientists to support our efforts in drug innovation.

BS/MS Pulmonary Pharmacology Associates

Requirements include a BS/MS degree in Pharmacology, Biology, Physiology or related medical discipline and a minimum of 2 years experience in an industrial or academic environment preferably in the area of respiratory research. Familiarity with in vivo pulmonary mechanistic analysis in rodents or other animal models is essential, including animal handling, dosing (i.v., i.p., i.n.), and other research procedures. The associate should be familiar with the use of isolated tissues, radiolabeled and binding, and other receptor operation. The associate should also be able to use computer programs for word processing, spreadsheets and graphics in the design and conduct of research studies and in the interpretation and presentation of test results.

Requirements include a BS/MS degree in Pharmacology, Biology, Physiology or related biomedical discipline and a minimum of 2 years experience in an industrial or academic environment, preferably in the area of respiratory research. Familiarity with *in vivo* pulmonary mechanical analysis in rodents or other animals is essential, including animal handling, dosing (i.v., oral, aerosol) and surgery. In addition, the candidate should be familiar with the use of isolated tissues, radioligand binding, and chart recorder operation. The associate should also be able to use computer programs for word processing, spreadsheets and graphics in the design and conduct of research studies and in the interpretation and presentation of test results.

Requirements include a B.S/M.S. in Cell Biology, Microbiology or Biochemistry, and a minimum of two years post-graduate experience in an commercial or academic setting. The candidate must have experience in tissue culture techniques for the preparation and maintenance of primary or immortalized cell lines, with particular expertise in the area of epithelial cells and leukocytes. Experience in measuring cellular responses, such as secretion (using RIA, ELISA, etc.), enzymatic activity, oxidative burst, chemotaxis, and intracellular calcium levels is also necessary. The individual should possess familiarity with biochemical techniques, including receptor binding assays. Expertise in isolating tissue samples from small animals is also required; experience in the use of animal models of asthma is desirable. In addition, the candidate should be knowledgeable in the laboratory use of computers for data collection and analysis, especially the use of Excel and data graphing programs.

Outstanding and relating top talent is a high priority at Hoechst Marion Roussel. That is why we offer one of the most outstanding and comprehensive compensation and benefits packages in the pharmaceutical industry. Our total rewards package includes competitive compensation and bonus programs, flexible medical and dental plans, tuition assistance, income protection plans, and generous retirement plans that have been cited as the best in the industry. For consideration or mail your resume (suitable for scanning) including salary history/requirements, to: Staffing Manager, c/o JCH, Ref #11998BHW001, Hoechst Marion Roussel, Route 202-206, P.O. Box 6800, Bridgewater, New Jersey 08807-0800, U.S.A., or e-mail: jobs@hmr.com. An affirmative action company information, we invite you to visit our website: www.hmr.com. An affirmative action employer M/F/D/V.

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manage the development of new dosage forms/delivery systems for protein drugs from proof-of-concept to successful manufacturing implementation and regulatory filing. You will also supervise laboratory studies which include the physical and chemical characterization of proteins with regard to compatibility with pharmaceutical excipients and delivery systems. Familiarity with small molecule preformulation/formulation development is also desirable.

We offer progressive benefits. Send your resume, indicating job Code SC1537, to: Genentech, Inc., Human Resources, PO Box 1950, South San Francisco, CA 94083-1950. Plain typefaces, no faxes. E-mail your resume to jobs@genet.com (ASCII files only with a maximum line width of 76 characters). EOF

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The Science of Agricultural Genetics

RESEARCH MANAGER (Job # 98-00145A)

Product Development — Quantitative Traits

The successful candidate will be responsible for the design, development, interpretation, and communication of new approaches using genomics data to develop hybrid corn products and improve plant breeding efficiency. This individual will provide statistical expertise and consultation for cross-functional projects involving RNA profiling and quantitative genetics. The responsibilities of this position include: (i) initiating, designing, conducting, and analyzing experiments involving RNA profiling and quantitative genetics, (ii) developing methodology to utilize gene expression data for development of new corn hybrids, and (iii) using tools and resources from genomics to improve plant breeding efficiency and product development. A Ph.D. with a background in Molecular Genetics, Statistics, or Computational Sciences with 3 to 5 years research experience is required. Experience in molecular genetics, statistical analysis, or algorithm development is essential. The successful candidate will be able to function effectively in a highly collaborative environment, show leadership and be successful in team environments, have experience or familiarity with plant quantitative and breeding methodologies, and possess high communication skills. Experience in analyzing experiments utilizing expression profiling technologies is desired. Application deadline: June 1, 1998.

RESEARCH MANAGER (Job #CP-818)

Crop Protection — Transformation

A Research Manager is needed to plan and conduct a comprehensive research program focusing on production of transgenic maize containing crop protection genes for herbicide, insect, and disease resistance traits. The successful candidate will develop and implement methods for highly efficient transformation technology while interacting closely with a multi-disciplinary team to meet aggressive gene evaluation and product development goals. Minimum requirements are a Ph.D. in plant or biological science plus three to five years experience in transformation, preferably with maize, or M.S. and six to eight years relevant experience. In depth knowledge of plant tissue culture, transformation, and transgene expression required. Superior analytical, problem-solving, and organizational abilities are needed as well as strong leadership skills and excellent verbal and written communication abilities. Extensive familiarity with MS Office software is required. Application deadline: May 27, 1998.

For confidential consideration send 3 copies of your cover letter and current resume, indicating job number: Pioneer Hi-Bred International, Inc., Attn: Human Resources-Research P.O. Box 1004, Johnston, IA 50131-1004, or e-mail jobsresearch@phibred.com. Visit our website at <http://www.pioneer.com>.

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



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COPERNICUS
GENE SYSTEMS, INC.

Copernicus Gene Systems, Inc. is an emerging biotechnology company focused on developing and commercializing non-viral pharmaceutical systems for human gene therapy, including treatments for hypercholesterolemia, cystic fibrosis, hemophilia, and cancer. We are seeking two individuals:

- A Ph.D. in either pharmacology, biology, or molecular biology with three years experience in preclinical evaluation of disease states and post-transfection protein activity in human cells.
- A Ph.D. in biochemistry, biophysics, or chemistry with three years experience in biophysical characterization of DNA and/or biopolymers.

Submit CV to:

K.M. Miller

25800 Science Park Dr., Ste. 105

Beachwood, OH 44122

Fax (216) 378-3391

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STAFF SCIENTIST Toxicology

ALZA Corporation, headquartered in Palo Alto, is a leader in the development and commercialization of innovative pharmaceutical products using advanced drug delivery technologies that add medical and economic value to drug therapies. We have an outstanding opportunity for a Staff Scientist to join our team.

We will rely on you to prepare protocols for research and regulatory toxicology studies in accordance with FDA, USDA, IACUC and international regulatory guidelines. You will also supervise and conduct in-life activities for these studies, as well as present data, both verbally and in writing. A PhD in Toxicology, Pharmacology, or related field and 0-4 years experience, are required.

In addition to attractive compensation and benefits, we offer a rare opportunity to collaborate with a diverse group of dedicated and skilled professionals in a cooperative, challenging environment. Please send/fax/email resume to ALZA Corporation, HR Dept., Attn: Job #:SC1515-GS, 950 Page Mill Road, PO Box 10950, Palo Alto, CA 94303-0802; fax: (650) 494-5656; email: jobs@alza.com. TDD (650) 494-5003. Or call our Job Hotline at (650) 494-5319 for more information. ALZA is proud to be an Equal Opportunity Employer and welcomes applications from minorities and persons with disabilities.



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Postdoctoral Positions - Department of Neurobiology La Jolla, California

The Scripps Research Institute is currently seeking two postdoctoral professionals for the following projects in developmental neurobiology.

- One project involves studying the structure and function of cell surface proteins critical in neural development and regeneration. Studies will focus on cell adhesion molecules (CAMs), as well as the extracellular and cytoplasmic proteins that interact with CAMs. Both native and recombinant proteins will be used. Cellular and molecular biological approaches such as dominant negative analyses and site-directed mutagenesis will be used in conjunction with structural analyses. (Apply to the attention of Dr. Bruce A. Cunningham)
- The second project involves studying mechanisms of neuron-glia interaction and regeneration in the central nervous system with an emphasis on methods of gene discovery, such as differential display and subtractive hybridization, and the analysis of the neural cell surface proteins and signaling. (Apply to the attention of Dr. Kathryn L. Crossin)

To apply, please submit a CV including a statement of research experience/interests and arrange for letters of reference to be sent to one of the above individuals, at The Scripps Research Institute, Department of Neurobiology, 10550 North Torrey Pines Road, SBR-14, La Jolla, California 92037.

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www.scripps.edu

BIOINFORMATICS PROFESSIONALS



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Johnson & Johnson, with \$18.8 billion in sales, is the world's largest and most comprehensive manufacturer of health care products serving consumer, professional, diagnostic, and pharmaceutical markets.

The R.W. Johnson Pharmaceutical Research Institute (RWJPRI) conducts research and development in a variety of therapeutic areas for the Johnson & Johnson companies: Cilag, Ortho-McNeil Pharmaceutical, Ortho Biotech and Ortho Dermatological. Bioinformatics and Information Technology are integral to the operation of RWJPRI as we seek new and innovative ways to discover critical proteins with therapeutic and/or drug target potential.

You can be part of our world-class organization if you meet the requirements of the following opportunity with our Discovery Technology group at our facility in Southern California.

POSTDOCTORAL FELLOW (Bioinformatics)

Requires a Ph.D. in molecular biology, neurobiology, physiology, or a related field. Familiarity with Genbank, EMBL, SWISS-PROT, PIR, and Brookhaven Protein Databases as well as experience in sequence analysis softwares (GCG, BLAST, etc.) is essential; C programming experience in the UNIX system is preferred.

As a member of our group, you will be joining a growing number of scientists conducting bioinformatics and computational biology in collaboration with our drug discovery teams. You will use state-of-the-art computers and softwares to search for proteins with therapeutic and/or drug target potentials. You will also develop and implement software tools for database mining and sequence analysis.

To apply for the above La Jolla opening, please send your résumé, including salary requirement to: **Human Resources, R.W. Johnson PRI, 3535 General Atomics Court, Suite 100, San Diego, CA 92121. E-mail: jbroussa@prius.jnj.com.**

We are an Equal Opportunity Employer and support diversity in the workplace.



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Parke-Davis Pharmaceutical Research, a division of Warner-Lambert and a leader in biological research to benefit world health, offers you exceptional opportunities to join our renowned Research team in Preclinical Pharmacokinetics & Drug Metabolism, as we continue to influence the future of scientific technology.

SENIOR SCIENTIST/RESEARCH ASSOCIATE

You'll assist in the implementation and development of a pharmacokinetic/ pharmacodynamic (PK/PD) plan to support discovery and preclinical development projects leading to registration of drug candidates. In addition, you will correlate and interpret complex PK/PD and PK- structure-activity relationships in drug candidates; propose/initiate changes to advance methods/processes in preclinical pharmacokinetics, which would accelerate discovery/development; and make decisions within interdepartment projects matrix teams. A Ph.D. or equivalent in Pharmacokinetics, Biopharmaceutics or related field with 2-6 years experience in PK/PD, (preferably with cardiovascular anti-infective or oncology drugs) is required. Excellent interpersonal, supervisory and communication skills are a must; competent computer skills (word processing, spreadsheets, graphing, pharmacokinetic/pharmacodynamic calculation) are essential. Job Code: CJM-98162

SENIOR ASSOCIATE SCIENTIST/SCIENTIST

Join our Pharmacokinetics, Dynamics and Metabolism team and assess the in vitro metabolism of discovery and development drug candidates. You will aid in the identification of metabolites and the enzymes involved in metabolism. You will also assist in the determination of hepatotoxic risk factors through phenotyping of specific enzymes and conduct assays for the purpose of correlating phenotypic activity to specific genotypes. Qualifications include a degree in a biological discipline such as Toxicology, Biochemistry, Pharmacology or a related field. Ideal candidates will have experience in the area of drug metabolism with an emphasis on isoenzyme identification (Phase II enzymes), a background in modern molecular biological techniques, bioanalytical assay development and HPLC. The position requires a BS or MS degree with 2-4 years' experience or a Ph.D. with 1-2 years' experience. Job Code: RJB-98167

SENIOR SCIENTIST/RESEARCH ASSOCIATE

Here's your opportunity to be part of our multidisciplinary team assessing potential risk factors and mechanisms for drug-induced liver hepatotoxicity. You'll examine the effect of drugs on cellular redox state, glutathione levels, lipid peroxidation, gene expression, etc., using human and animal hepatocyte models. Candidates must have a Ph.D. in a biological discipline such as Toxicology, Biochemistry, Pharmacology, etc., along with 2-3 years' experience in molecular pharmacology or mechanistic toxicology. A strong background with chemicals or biochemical, ideally with reactive metabolite chemistry is required. Experience with modern molecular biological techniques and bioanalytical assay development is also required. Job Code: RJB-98168

SENIOR ASSOCIATE SCIENTIST/SCIENTIST

Design, implement and coordinate discovery protocols, prepare dose formulations, develop analytical methods/support/report results for discovery projects, as well as maintain computerized database on discovery compounds. A BS/MS in Biological Sciences or Chemistry, 7-10 years' experience, an understanding of pharmacokinetic principles and proficient computer skills are required. Job Code: CJM-98136

SENIOR ASSOCIATE SCIENTIST/SCIENTIST

Calculate pharmacokinetic/pharmacodynamic parameters and interact with project matrix teams as you assemble the components of research reports, coordinate and monitor preclinical studies and improve study processes from implementation to issuing reports. Qualifications include a BS/MS in Pharmacy, Pharmacology/Toxicology or a related discipline, 5-7 years' experience in pharmaceutical R&D, an understanding of pharmacokinetic principles and proficient computer skills. Job Code: CJM-98161

Gain a scientific edge at Parke-Davis and enjoy a competitive salary and exceptional benefits. Qualified candidates mail, fax or e-mail a scannable resume*, indicating the Job Code of interest, to: **Parke-Davis Resume Processing Center, P.O. Box 92242, Los Angeles, CA 90009-2242. Fax: (310) 337-3367. E-mail: parkedavis@isearch.com**

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



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POSITIONS OPEN



DIRECTOR

The Institute of Molecular Medicine and Genetics of the Medical College of Georgia is presently entering its sixth year of development. It currently has a faculty of 36 and a total personnel of 181, 23 of whom are graduate or M.D.-Ph.D. students, and 45 of whom are Postdoctoral Fellows. It sponsors a Ph.D. program in molecular medicine and a M.D.-Ph.D. program. The present budget is \$11,000,000, over half of which comes from extramural funds. The mission of the Institute is to develop a nationally recognized integrated program that emphasizes research in cell signaling, molecular immunology, gene regulation, developmental biology, and neuro-oncology, and particularly how discoveries in these areas can be brought to bear on understanding and treating human diseases. The Institute occupies 80,000 square feet of research space that is fully equipped for modern medical research. Institute resources include transgenic mouse and zebrafish facilities; a molecular biology core; an imaging core housing both confocal and electron microscopy; cell sorting by cytofluorometry; and a core facility to analyze transgenic animals structurally and functionally. In addition, a monoclonal antibody core facility is available on the campus of the University of Georgia in Athens.

The Medical College of Georgia is now seeking a Director who will assume the major leadership position in the Institute as well as pursue an independent research program and recruit additional junior faculty to such a program. Substantial resources have been reserved to support this initiative. This position of Director is at the academic rank of Professor and is supported by a fully endowed Chair for a Georgia Research Alliance Eminent Scholar. Priority will be given to applicant who can relate basic research to clinical problems and, therefore, M.D. or M.D.-Ph.D. degree(s) will be a definite asset, but not an absolute requirement for those seeking to fill this position.

Reply with curriculum vitae to: **Howard Rasmussen, Chair, Search Committee, Institute of Molecular Medicine and Genetics, Medical College of Georgia, Augusta, GA 30912-2697.** The Medical College of Georgia is an Equal Opportunity Employer. We invite applications or nominations from women, racial minorities, and the disabled.

UNIVERSITY OF FLORIDA

Seeks to fill the **MARCIA WHITNEY SCHOTT EMINENT SCHOLAR CHAIR and CHIEF** of the Division of Clinical Immunology, Rheumatology, and Allergy in the Department of Medicine. A Physician Investigator with M.D. degree, Board certification in internal medicine and rheumatology, and a well-established research program who can direct the research training grant in rheumatology is being sought. Existing program is well-balanced in respect to providing excellent clinical care and performing both basic and clinical research. Qualified candidates should possess the abilities to lead and develop programs in research, education, and health care delivery. This is a tenure-track position. Salary and benefits commensurate with experience. Recruiting deadline: July 1, 1998. Anticipated starting date: January 1, 1999. Please submit curriculum vitae and other information to: **Dr. Edward R. Block, Research Service (151), VA Medical Center, Gainesville, FL 32608-1197.** An Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION

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

POSITIONS OPEN



EMINENT SCHOLAR/RICHARDSON CHAIR ENDOWED PROFESSORSHIP NEUROBIOLOGY/NEUROPROTECTION University of Florida College of Medicine Department of Ophthalmology

Applications are invited for a full-time position for prestigious Endowed Chair in the field of neurobiology/neuroprotection. Preference will be given to interest in neuroprotection related to ocular disease, or to developing such a program. Candidates must hold a Ph.D. and/or M.D., have obtained or be eligible for Professorial rank, and have demonstrated a superlative record of accomplishment in an area of neurobiology. Researchers who are not currently members of a Department of Ophthalmology are encouraged to apply. The successful candidate will have a primary appointment in the Department of Ophthalmology with a joint appointment to the appropriate basic science department in the University of Florida. Research space and start-up funds will be provided for establishing a new laboratory.

Deadline for receipt of applications will be July 31, 1998, to start around April 1999.

Candidates should submit a curriculum vitae, a statement of research objectives, and the names of three referees to: **Search Committee, William Hauswirth, Ph.D., and Paul Hargrave, Ph.D., Co-Chairs, Department of Ophthalmology, College of Medicine, Box 100284 JHMC, University of Florida, Gainesville, FL 32610-0284.**

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

THE ROBINSON ENDOWED CHAIR IN GASTROENTEROLOGY

The University of Oklahoma Health Sciences Center invites applications and nominations for The Robinson Chair in Gastroenterology. The primary goal of the Chair is to develop, promote, and foster research in a focused and clinically relevant area of gastroenterology. Candidates should possess a strong record of leadership and achievement in scholarly activities in gastrointestinal research that complement ongoing programs at the University of Oklahoma including the areas of gastrointestinal neurophysiology, immunology, neuroimmune function, motility, and mucosal function.

The successful candidate will hold an M.D. or M.D.-Ph.D. degree and possess strong clinical, teaching, and administrative skills. The candidate would be expected to devote 75 percent of his/her time to research and 25 percent to clinical activities and teaching of GI Fellows and housestaff. The package for the Robinson Chair in Gastroenterology will include a nationally competitive salary; faculty appointment in one or more academic departments; excellent space and start-up funds for the new research team; annual interest on the \$1.8 million endowment for the academic and research program of the individual selected to the Chair.

Please send applications with curriculum vitae and nominations to:

**Richard F. Harty, M.D.
Professor of Medicine
Chief of Gastroenterology**

**University of Oklahoma Health Sciences Center
Oklahoma City, OK 73126**

An Affirmative Action Employer.

BIOCHEMIST

The Department of Medicine, Section of Nephrology, Tulane University School of Medicine is searching for an **ASSISTANT PROFESSOR**-level Biochemist with background in molecular and cellular biology. Previous experimental experience in the areas of protein isolation and identification, sequencing, and cloning is preferred. Collaborate with other Investigators in a modern, well-equipped laboratory, joining a research team involved in basic studies in hypertension etiology. Excellent salary and benefits. Interested applicants should send an updated curriculum vitae and the names, addresses, and telephone numbers of three references to: **Jules B. Puschett, M.D., Department of Medicine, SL12, 1430 Tulane Avenue, New Orleans, LA 70112-2699.** Position will remain open until a qualified candidate is selected. Tulane University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

**UAB THE UNIVERSITY OF
ALABAMA AT BIRMINGHAM**

CHAIR DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES

The University of Alabama at Birmingham (UAB) invites applications for the position of Chair of the Department of Environmental Health Sciences. UAB is a comprehensive, public, urban Carnegie Research I University. It is the state's largest research institution with a nationally recognized academic health center that provides instruction, research, and public service and health in the health-related areas. UAB ranks among the top 30 universities receiving federal research and development funds and 13th among institutions receiving NIH funding.

The School of Public Health is 56 faculty and more than 400 students. Enrollment has doubled in the past five years and extramurally funded research has tripled in the last three years advancing the school to a leader on campus in extramural support. The Department of Environmental Health Sciences offers programs leading to the following degrees: Master of Public Health, Master of Science, Doctor of Public Health, and Doctor of Philosophy.

This position offers an excellent opportunity to build upon and implement a commitment to education and research shared by the faculty and university administration. Implementation of this vision will be supported by the commitment of new funding and the potential to recruit new faculty.

Leading candidates will have distinguished records of accomplishments in higher education and/or other fields of professional endeavor and will have demonstrated significant leadership skills. Qualifications for the position include an earned Doctorate in environmental health or related disciplines or fields; a record of teaching, service, research, and scholarly activities; individual and collaborative research; and administrative experience. The person must have the energy, experience, leadership ability, and vision to enhance the department's national and international recognition by the year 2005. Nominations and expressions of interest are encouraged immediately.

Contact: **Cheryl Pavick Soggs, Vice President, Higher Education Practice, A. T. Kearney, Inc., 1100 Abernathy Road, Suite 900, Atlanta, GA 30328-5603. Telephone: 770-393-9900; FAX: 770-395-9312; e-mail: cheryl_soggs@atkearney.com.**

An Equal Opportunity Employer.

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

ASSISTANT PROFESSOR, BIOLOGY DEPAUL UNIVERSITY

DePaul University, Chicagoland's largest Catholic University, currently has an opportunity for an Assistant Professor, biology. One year with possibility of tenure track, start September 1998. Developmental-organismal, mammalian, or other vertebrate. Strong commitment to undergraduate teaching. Ph.D. is required; postdoctorate, teaching, preferred. Teach introductory biology with laboratory, majors and non-majors, and specialty courses. Modest research support available. Send letter, curriculum vitae, teaching philosophy, and three letters of reference to: **Dr. F. R. Prete, Search Committee, Department of Biological Sciences, DePaul University, 1036 West Belden Avenue, Chicago, IL 60614-3298. FAX: 773-325-7596; e-mail: fprete@wppost.depaul.edu.**

DePaul University, an employer of choice, is committed to diversity and equality in education and employment.

UNIVERSITY OF
WISCONSIN
MADISON

McArdle Laboratory for Cancer Research
Department of Oncology, Medical School
Faculty Position in Cancer Genetics

We are seeking a colleague to join us in a tenure-track faculty position as an Assistant Professor of Oncology in the McArdle Laboratory for Cancer Research, Medical School, University of Wisconsin-Madison. The faculty at the McArdle Laboratory are committed to understanding the origins, prevention, and therapy of cancer through basic research. Applicants for this position should be interested generally in the mechanisms of carcinogenesis and in pursuing research that builds on our campus' strengths in the broad area of cancer genetics. The department provides a variety of shared research resources, including superb animal facilities ideal for investigators who use mouse genetics, gene knockouts, and transgenic animals to study cancer. Members of the department participate in excellent, well-funded graduate and postgraduate training programs. To be considered, please submit a curriculum vitae, publication list, a 2- to 3- page statement of research accomplishments and future objectives, and have 3 qualified individuals send letters of recommendation. Review of the applications will begin on July 1, 1998.

Applications and letters of recommendation should be sent to: **Faculty Search Committee, McArdle Laboratory for Cancer Research, University of Wisconsin, 1400 University Avenue, Madison, WI 53706-1599.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer. Wisconsin State laws permit public access to names, addresses, and occupations of applicants.*

Chair, Department of Neurological Surgery
University of Florida, College of Medicine

The University of Florida College of Medicine seeks a distinguished individual to serve as Professor and Chair of the Department of Neurological Surgery. Applicants should have an M.D. or M.D./Ph.D degree and demonstrated accomplishments in research, education, clinical service, and administration. The Chair is responsible for leadership and management of the department, including faculty recruitment and development, undergraduate and graduate medical education, fiscal affairs, clinical programs, and research. The Chair will also assure an effective interface between the department and the UF Brain Institute, a major university-wide initiative. The successful candidate will provide overall leadership of neurosurgery programs in Gainesville, including the VA Medical Center, and in Jacksonville and is expected to work in concert with other health professionals to provide an integrated approach to the provision of health services. The position offers a competitive salary. Qualified individuals should send their curriculum vitae and three letters of recommendation to: **Douglas K. Anderson, Ph.D., Chair, Neurological Surgery Search Committee, Department of Neuroscience, University of Florida College of Medicine, P.O. Box 100244, Gainesville, FL 32610-0244.** Application deadline is July 1, 1998, with a start date on or after October 1, 1998. *The University of Florida is an Equal Opportunity Employer, and minorities and women are encouraged to apply.*

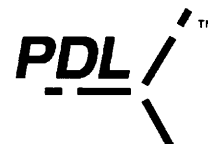
PROTEIN DESIGN LABS

Protein Design Labs, an expanding biotechnology company with an interdisciplinary approach to drug discovery, is seeking qualified applicants to join a new microbiology team headed by Stanley Falkow, PhD, a well known scientist in the field of microbial pathogenesis.

SCIENTIST/STAFF SCIENTIST

As a member of this group, we will rely on you to conduct independent research in a team-oriented setting as well as design, implement, and direct innovative molecular biology/bacterial genetic approaches toward the discovery of antibiotic targets. Additionally, you will interpret scientific validity of results, collaborate with other scientists, and advise supervisors and colleagues. Candidates must possess a PhD in Molecular Biology with 2+ years post-doctoral or related industry experience in molecular biology techniques and bacterial genetics (gram positive organisms preferred). Other requirements are the ability to supervise personnel, strong written and verbal communication skills including solid presentation skills, and computer proficiency with a variety of PC/MAC software programs.

PDL's fast-paced, highly challenging environment offers exceptional professional opportunities, competitive salaries and a comprehensive benefits package. Later in 1998, we will be relocating to Fremont, CA. Visit our home page at www.pdl.com to learn about our company and other career opportunities at PDL. Please send your resume to: Protein Design Labs, Inc., Human Resources, Job # 410, 2375 Garcia Ave., Mountain View, CA 94043, fax 650/962-0437. EOE.



a strong pipeline for the future

ICOS Corporation is making inroads in the field of inflammation with several promising drug candidates already in Phase I and II clinical trials for ARDS, multiple sclerosis, hemorrhagic shock, and myocardial infarction. Our focused R&D efforts promise continued growth with exceptional career opportunities.



gel electrophoresis, IEF, protein purification, and chemical modification of proteins. A background in amino acid analysis, peptide synthesis and mass spectrometry is a plus. Also desirable is an ability to coordinate/meet timelines, as well as strong interpersonal and organizational skills.

RESEARCH ASSOCIATE

We are seeking a detail-oriented, self-motivated Research Associate to join our Protein Microchemistry group. You will identify, characterize, and purify proteins from recombinant and natural sources, as well as analyze samples to support research, development, manufacturing, and QC groups. BS/MS in Biochemistry or related field is required along with 2+ years experience in academic research or in the pharmaceutical industry. Also needed are knowledge of peptide/protein sequencing, proteolytic digestion of protein, HPLC,

ICOS offers the opportunity to contribute to cutting-edge science as part of our high profile team of biopharmaceutical talent. We provide a highly attractive compensation and benefits package, including stock options. **To apply, please send your resume to ICOS Corporation, Human Resources, REF: TRO0598/572, 22021 20th Avenue SE, Bothell, WA 98021.** You may also see our job postings at www.bio.com. EOE.

icos

POSITIONS OPEN

POSTDOCTORAL OPPORTUNITIES JUNIOR AND SENIOR FACULTY POSITIONS in Neuroscience of Psychiatric Disease

The Nathan Kline Institute (NKI), a state-funded research institute closely affiliated with the Department of Psychiatry of New York University Medical School, invites applications for tenure-track faculty positions at the **ASSISTANT to FULL PROFESSOR** level, with a possible dual appointment at NKI and the NYU Medical Center, from applicants with interests in basic and clinical neuroscience relevant to Alzheimer's, schizophrenia, and major neuropsychiatric diseases. NKI, located on the 200-acre campus of the Rockland Psychiatric Center 15 miles from downtown Manhattan, has completed a major expansion, which includes newly constructed facilities and additional staff for basic research, neuroimaging, clinical investigation, and services research. Candidates with a Ph.D., M.D., or both should have a strong background in approaching nervous system function using molecular, genetic, and/or neurophysiological techniques. Applications are encouraged from candidates with interests in psychiatric genetics, molecular biology and neuropathology, transgenic modeling of neuropsychiatric disease, neurophysiology, and molecular pharmacology. Successful senior faculty should have a record of scientific accomplishments, internationally recognized expertise, and proven ability to lead to a competitive research program. Successful junior faculty will be expected to collaborate and develop a good-quality, externally funded program of research. Additional Postdoctoral opportunities are for one to two years, to participate in NIH-funded research programs. Successful candidates should be able to establish collaborations with a large, multidisciplinary faculty who cooperate in investigating disease pathogenesis at the molecular, preclinical, and clinical levels.

Salary and recruitment packages offered will be commensurate with qualifications and experience. Applicants should send a curriculum vitae, a statement of research interests, and a list of references to: **Abel Lajtha, Ph.D., Chair, Search Committee, Nathan Kline Institute, 140 Old Orangeburg Road, Orangeburg, NY 10962.** *Equal Opportunity/Access/Affirmative Action.*

ASSISTANT PROFESSOR MICROBIOLOGY

The Department of Microbiology and Molecular Genetics, Oklahoma State University, is opening the search for a tenure-track faculty position at the Assistant Professor level to begin August 17, 1999. Appointment is for nine academic months, with a nationally competitive salary and start-up funds.

The successful candidate is expected to participate in the undergraduate microbiology, cell and molecular biology curriculum, develop a graduate course in his/her specialty, and supervise M.S. and Ph.D. students.

We seek candidates with a strong potential to establish extramurally supported research in the broad field of biological responses to external signals (e.g., sensing of cellular responses to xenobiotics and/or applications of metalloprotein systems). A Ph.D. degree, postdoctoral experience, and demonstrated expertise in the field are required.

Interested applicants should submit a curriculum vitae, research and teaching statements, and have three recommendation letters sent to: **R. A. Prade, Chair Microbiology Search Committee, Department of Microbiology and Molecular Genetics, 306 LSE, Oklahoma State University, Stillwater, OK 74078-3020.** For additional information visit our website: www.cas.okstate.edu/micro/.

Deadline for applications is September 1, 1998.

Oklahoma State University is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are particularly welcome.

The Department of Psychology: Experimental of Duke University has a non-tenure-track **ASSISTANT RESEARCH PROFESSOR** position in the area of experimental and theoretical analysis of animal learning. This three-year appointment is renewable for an additional two years. Duties include a regular teaching schedule and collaboration with **Professor John E. R. Staddon's** research group. Applicants should send a curriculum vitae, four or fewer publications, and names of three referees to: **Dr. J. E. R. Staddon, Department of Psychology: Experimental, Duke University, Durham, NC 27708-0086** by June 10, 1998. *Duke is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN



FACULTY POSITIONS. The Departments of Physiology and Pharmacology of the College of Medical Sciences at Nova Southeastern University invite applications for the positions of **ASSISTANT PROFESSOR** in the areas of general or cardiovascular physiology, and general, cardiovascular, or neuropharmacology. The College of Medical Sciences is located in the new Health Professions Division facility on the Fort Lauderdale campus. Salaries are competitive and fringe benefits are generous. The candidates' responsibilities will include participation in team-taught courses to health profession students, scholarship, and service. The starting date for the positions is July 1, 1998, pending approval of the Board of Trustees. Please send a letter of intent stating position desired, a résumé, copies of transcripts, and the names, addresses, and telephone numbers of three professional references to: **Nova Southeastern University, Human Resources Department (HLF), 3301 College Avenue, Ft. Lauderdale, FL 33314.** *Nova Southeastern University is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION FOR TRANSLATIONAL SCIENTIST Sidney Kimmel Cancer Center

The Sidney Kimmel Cancer Center (SKCC) is actively recruiting a Research Scientist with an interest in the clinical application of promising cancer treatments. Candidates should currently conduct an independent laboratory program of cancer research. Qualified Ph.D's and M.D's at all faculty levels are encouraged to apply. Preference will be given to candidates with a strong track record or outstanding potential in translational research.

The Sidney Kimmel Cancer Center is committed to the rapid translation of laboratory discoveries to the treatment of cancer. This commitment is evidenced through close ties between basic laboratory scientists and the SKCC clinical trials program. The Cancer Center features a renowned faculty with research ranging from basic aspects of cancer biology and immunology to cancer gene therapy, immunotherapy, and clinical oncology research. Clinical research and patient access is conducted through a partnership with Sharp HealthCare, the largest non-profit healthcare system in San Diego.

The Sidney Kimmel Cancer Center is located in the rich interactive scientific environment of San Diego's La Jolla research community, which includes other esteemed non-profit research institutions, a major university, and numerous biotechnology companies.

Details about the Sidney Kimmel Cancer Center, the faculty, and the clinical oncology program can be found on the center's website: <http://www.skcc.org>.

Interested candidates should submit a complete curriculum vitae, a description of current research interests, clinical interests, proposed future directions, and the names and addresses of three references to:

**Dr. Ivor Royston
Chair, Search Committee
Sidney Kimmel Cancer Center
10835 Altman Row
San Diego, CA 92121**

Affirmative Action/Equal Opportunity Employer.

MICROBIAL GENETICIST. Luther College, Decorah, Iowa, invites applications for a tenure-track appointment at the rank of **ASSISTANT PROFESSOR** beginning January 1999. Able to teach genetics and microbiology, as well as participate in a team-taught principles of biology course. Candidate will be expected to direct undergraduate students in research and to seek external funding for research. Must be committed to undergraduate teaching and research in the context of a liberal arts college; visit our website: www.luther.edu/~biodept to learn about our department. Ph.D. required and postdoctoral experience desirable. Review of applications to be completed by September 1, 1998. Send letter of application, curriculum vitae, three letters of recommendation, and transcripts of undergraduate and graduate work to: **Dr. Jim Eckblad, Head, Department of Biology, Luther College, Decorah, IA 52101.** E-mail: eckbladj@luther.edu. *An Equal Employment Opportunity Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR OF MICROBIOLOGY AND IMMUNOLOGY University of Michigan Medical School Viral Pathogenesis/Bacterial Pathogenesis/ Host Immune Response to Pathogens

The Department of Microbiology and Immunology is seeking to fill two tenure-track faculty positions with outstanding scientists who have completed a Ph.D. or equivalent degree and at least two years of postdoctoral training. Investigators with an interest in viral-host interactions, viral pathogenesis, or the host immune response to viral infections are encouraged to apply. These individuals should have a broad interest in host-pathogen interactions and the ability to teach viral pathogenesis to medical and graduate students. Also encouraged to apply are Investigators who study bacterial-host interactions or the immune response to bacterial infections. For the past several years, the Department of Microbiology and Immunology has been adding resources to its core program in the areas of microbial pathogenesis and the host response to infection. In addition to this core group, Investigators from various other departments and units in the Medical School and University share similar interests and contribute to this programmatic effort. In this announcement, we are soliciting applications from candidates who will conduct a research program that will enhance this institutional focus. The Department offers attractive space, start-up resources, a competitive salary, a stimulating intellectual environment, and an excellent graduate program. Candidates should send a statement of their current research and future research plans and their teaching interests, along with a copy of their curriculum vitae and bibliography, and arrange to have at least three letters of reference sent to: **Chair of the Search Committee, Department of Microbiology and Immunology, 5641 Medical Sciences II, Ann Arbor, MI 48109-0620.** Applications should be received by August 1, 1998. *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE/FULL PROFESSOR OF PEDIATRICS University of Pittsburgh School of Medicine

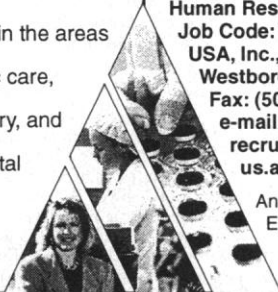
The Division of Hematology/Oncology at the Children's Hospital of Pittsburgh (CHP) is seeking applications from individuals for a tenure-track position as Associate Professor or Professor of pediatrics. To complement our existing strengths, we are especially interested in individuals with a primary research focus in the areas of signal transduction in hematopoietic cells, molecular oncology, and the molecular basis of hematopoietic cell differentiation or apoptosis. The ideal applicant for this position should possess a Ph.D. and/or M.D., demonstrate a long-standing record of scientific productivity and external funding, and show evidence of success in the training of graduate students and Postdoctoral Fellows. CHP has committed substantial start-up funds for this position as well as space in the Rangos Research Center, a state-of-the-art laboratory facility located in the heart of the University of Pittsburgh Medical Center. A highly competitive salary will be commensurate with the candidate's level of appointment. Secondary appointments in an appropriate basic science department at the University of Pittsburgh and the University of Pittsburgh Cancer Institute can be arranged.

Children's Hospital of Pittsburgh ranks among the top five independent children's hospitals in the nation in terms of peer-reviewed grant support. Numerous ongoing collaborations involve faculty at the University of Pittsburgh as well as nearby Carnegie-Mellon University. Applicants should send a full curriculum vitae, a brief statement of current research and future plans, and the names of three individuals who can provide recommendations to: **Edward V. Prochownik, M.D., Ph.D., The Paul C. Gaffney Professor of Pediatrics, Division of Hematology/Oncology, Children's Hospital of Pittsburgh, 3705 Fifth Avenue, Pittsburgh, PA 15213.** *The University of Pittsburgh is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR of pharmacology. Position available for Ph.D.-trained Pharmacologist in new medical school located in eastern Kentucky. Preference given to candidates with ability to teach central nervous system, cardiovascular, and renal pharmacology in a team setting. Send résumé in confidence to: **Dean of Basic Sciences, Pikeville College School of Osteopathic Medicine, 214 Sycamore Street, Pikeville, KY 41501.** FAX: 606-432-9669.



ASTRA USA, a wholly owned subsidiary of ASTRA AB of Sweden, is a manufacturer, marketer and distributor of a wide range of prescription pharmaceutical products. As one of the most rapidly growing pharmaceutical companies in the world, Astra is experiencing success on a larger scale than ever before. Astra is also known for quality products in the areas of critical cardiac care, obstetrics, surgery, and medical and dental anesthetics.



LIMS Specialist

Assume responsibility for the selection and implementation of a Laboratory Information Management System within the Pharmaceutical Development Department. Serve as project liaison for IS/IT and Validation and maintain the system once implemented. Requires a BS/BA in Chemistry (dual degree in Chemistry and computer related field preferred), previous experience in both chemistry and computing as well as prior LIMS and analytical laboratory testing experience. Strong NT Operating System and communication skills are also essential.

Send resume with salary history/requirements to:
Human Resources,
Job Code: YL170, ASTRA
USA, Inc., 50 Otis Street,
Westborough, MA 01581.
Fax: (508) 836-8505;
e-mail:
recruiting@astra.
us.astra.com

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CONFERENCE

25th Anniversary Conference NATIONAL FOUNDATION FOR CANCER RESEARCH *Presents*

Basic Science: Research for a Cure and Prevention

In Cooperation with
**Georgetown University Medical Center,
Office of Continuing Professional Education**



September 14-16, 1998

**Georgetown University
Conference Center
Washington DC**

*The faculty consists of world-renowned
scientists who work to dramatically improve
the way cancer is diagnosed, treated
and controlled.*

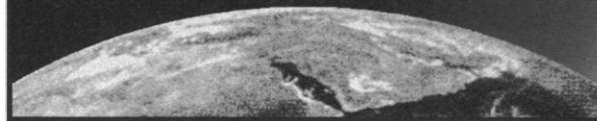
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E-mail: PMPMeeting@aol.com

EXHIBIT SPACE IS AVAILABLE

Topics include:

- Molecular Genetics of Cancer
- DNA Replication and Repair
- Macromolecular Interactions: Lessons for Signaling and Drug Discovery
- Small Molecule Gene Therapy
- Unique and Novel Targets
- Cellular Targets and Therapies
- Theoretical Drug Design
- Nutrition
- Chemoprevention
- Vaccines

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At Allergan, innovative ideas and products improve the quality of life for people all over the world. We are a technology driven, global health care leader in specialty pharmaceuticals, biologicals, and medical devices. If you would like to contribute in a company providing innovative health care solutions for today and tomorrow, take advantage of the following opportunities.

We are seeking three **RESEARCH SCIENTISTS** for the Neurotoxin Preclinical R&D research program (NTP) to design and conduct studies to elucidate the control mechanism for the duration of action of BOTOX®.

Key responsibilities include the plan and design of experiments and to identify, evaluate, and develop experimental approaches, methods and technologies consistent with the research program goals. The three key areas are:

• PROTEIN BIOCHEMISTRY

Requires a Ph.D. with demonstrated proficiency with protein biochemistry, and experience with *in-vitro* and/or *in-vivo* experimentation. Knowledge of the neuromuscular junction neurobiology, pharmacology, and clostridium botulinum neurotoxins helpful. 2+ years of post doctoral or industry experience.

• MOLECULAR BIOLOGY

Requires a Ph.D. with demonstrated proficiency with molecular biology concepts and methodology. Knowledge of *in-vivo* experimentation, neuromuscular junction, neurobiology, pharmacology and familiarity with clostridium botulinum neurotoxins and microorganisms helpful. 2+ years of post doctoral or industry experience.

• NEUROBIOLOGY

Requires a Ph.D. with demonstrated proficiency with the neuromuscular junction and experience with neurobiology of pain, and pharmacology. Knowledge of *in-vivo* experimentation and familiarity with laboratory and pre-clinical techniques for the measurement of nerve/muscle interactions, nerve growth, muscle strength measurements, pain models and/or nerve muscle imaging. Knowledge of botulinum toxin mechanism of action highly desired. 2+ years of post doctoral or industry experience.

All positions require excellent written/verbal communication skills.

We offer competitive salary, excellent benefits that include a pension plan, savings & investment (401k) plan, and employee stock ownership plan, together with a great working environment at our beautiful, campus-like worldwide headquarters. Please forward your resume (e-mail preferred) to: klaus_jennifer@allergan.com if unable to e-mail, send to: Allergan, Attn: Jennifer T2-1B, 2525 Dupont Dr., Irvine, CA 92612. EOE.



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POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR. The Division of Pulmonary and Critical Care Medicine, University of California, Davis, School of Medicine is recruiting for a full-time faculty position at the Assistant or Associate Professor level. Candidates must possess an M.D. degree, be Board-certified/eligible in internal medicine, pulmonary diseases, and critical care medicine, and be eligible for licensure in the State of California. Individuals with demonstrated records of research in lung cell biology, competence in teaching, and experience with clinical investigations are desired. Ability to obtain grant funding is expected. The Division has a strong clinical program, chiefly located at the University of California, Davis, Medical Center and affiliated with the Primary Care Network outpatient program throughout the Sacramento Valley. Therefore, training and experience necessary for acting as an Attending Physician in the pulmonary and critical care medicine is required. Interested applicants should send a résumé to: **Timothy E. Albertson, M.D., Ph.D., c/o John Beishke, Division of Pulmonary and Critical Care Medicine, University of California, Davis, Medical Center, 4150 V Street, Suite 3400, Sacramento, CA 95817.** This position is open until filled but no later than September 30, 1998. *The University of California, Davis, is an Equal Opportunity/Affirmative Action Employer.*

ECOSYSTEM MODELER

The U.S. Army Corps of Engineers Waterways Experiment Station is seeking qualified applicants for an ecosystem modeling position with emphasis on mathematical ecological models of aquatic and terrestrial ecosystems. Applicants should hold Ph.D. and have experience with several modeling approaches, including matrix-based and individual-based population models, metapopulation models, biomass and food web models. Training and experience in linking ecological models to process-based physical models is desirable. Salary is commensurate with experience within the range of \$46,000 to \$60,000. Interested applicants should send a curriculum vitae, summary of research experience, and future interests to:

Dr. Richard E. Price
Waterways Experiment Station
3909 Halls Ferry Road
Vicksburg, MS 39180
Telephone: 601-634-2667
FAX: 601-634-3120

The U.S. Army Corps of Engineers Waterways Experiment Station is an Equal Opportunity Employer. U.S. citizenship is required.

The Department of Microbiology, Immunology and Molecular Genetics at the Marshall University School of Medicine has reopened the search for candidates for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. Applicants should have a Ph.D., postdoctoral experience, and research interests in microbial pathogenesis using a molecular approach. The successful candidate is expected to develop an independent, externally funded research program and to participate in teaching medical microbiology to graduate and medical students. State-funded salary, start-up funds, and laboratory space with ready access to DNA/peptide, transgenic, tissue culture, and EM core facilities will be provided. Applicants should send a curriculum vitae, a brief description of research interests and future plans (limited to 500 words), a bibliography with reprints of significant publications, and three letters of recommendation by August 1, 1998, to: **Search Committee Chair, Department of Microbiology, Immunology and Molecular Genetics, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, WV 25704-9388.** E-mail: primeran@marshall.edu. *Marshall University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

ASSISTANT ADJUNCT PROFESSOR of surgery, Division of Urology, University of California, San Diego. Position includes participation in teaching, research, and university service. Salary per UC pay scale. Qualifications: (1) Ph.D. in pharmacology; (2) experience in basic research and teaching at the undergraduate, graduate, and postgraduate levels; (3) experience in immunopharmacology, reproductive toxicology, male infertility, and erectile dysfunction required. Send curriculum vitae with names of three references to: **Joseph D. Schmidt, M.D., Professor and Head, Division of Urology, University of California, San Diego, 200 West Arbor Drive, San Diego, CA 92103-8897.** Closing date May 31, 1998. *University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

NEGEV DESERT LARGE SCALE FACILITY

Ben-Gurion University of the Negev is pleased to announce that the European Union (EU) has recognized the Jacob Blaustein Institute for Desert Research (BIDR) as an EU Large Scale Facility for Desert Studies. This allows any Scientist from an EU member country or from an associated state to visit the BIDR for a period of up to two months. Access will be provided at no cost to the selected applicants. The budget covers travel, subsistence, and bench fees.

For more information concerning application procedures, the research centers, and the scientific activity of the institute please visit our website: <http://www.bgu.ac.il/BIDR/bic/welcome.htm> or contact:

Prof. Zvi Cohen, Project Manager-LSF
The Jacob Blaustein Institute
for Desert Research
Ben-Gurion University of the Negev
Sede Boqer 84990 Israel
E-mail: inter@bgumail.bgu.ac.il
FAX: 972-7-659-6718

Xenogen Corporation is a San Francisco Bay Area development stage company with a patented platform technology that allows for monitoring and imaging bacterial infections and other biological processes rapidly, in real time, in living animals. Opportunities exist at the Ph.D. and M.S. levels of expertise for the following:

RESEARCH SCIENTIST

This M.S. or Ph.D.-level position will work with gram-positive genetic systems and their development for use in drug discovery animal model systems using optical reporter. Expertise in microbial and molecular biology, gram-positive bacterial gene cloning, and gene technology is essential, as well as experience with microbial genetic systems, gene replacement, and knockout techniques. Experience in DNA molecular biological techniques, bacterial genetic techniques, and DNA sequence homology analysis. Industry experience is a plus.

PROGRAM DIRECTOR

This Ph.D.-level position requires five to ten years of experience in the pharmaceutical industry. The successful candidate will develop an animal model discovery program and work on industry standards and new technologies.

PROGRAM DIRECTOR

Ph.D.-level position exists for an Investigator with five to ten years of experience in eukaryotic and prokaryotic molecular biology to head program relating to infectious disease, oncology, and transgenics.

For confidential consideration, send or FAX your curriculum vitae or résumé to: **Human Resources Department, Xenogen Corporation, 860 Atlantic Avenue, Alameda, CA 94501.** FAX: 510-291-6196. *Equal Opportunity Employer.*

BIOCATALYSIS

RESEARCH CHEMIST or BIOLOGIST. ZP-1320/401-III (\$39,270 to 61,432) or ZP-1320/401-IV (\$55,969 to 85,978). The Biotechnology Division of the National Institute of Standards and Technology (NIST), Department of Commerce is actively seeking a Research Chemist, Molecular Biologist, or Enzymologist for a two-year term appointment. Applicants should have background in molecular or plant biology, biochemistry, or biochemical engineering that is appropriate for work on standards and/or measurements related to the biosynthesis of industrially important compounds. Interested applicants should **Telephone: 301-926-4851**, or consult the NIST website: www.nist.gov for more detailed position requirements and a copy of the vacancy announcement before submitting an application. Announcement Number: NIST/98-1611/CAH. Closing date: Applications must be postmarked by June 26, 1998, in order to receive consideration. Send applications to: **National Institute of Standards and Technology, Administrative Building, Room A-123, Office of Human Resources Management, Attn: NIST/98-1611/CAH, Gaithersburg, MD 20899.** *The Department of Commerce/NIST is an Equal Employment/Affirmative Action Employer. U.S. citizenship is required.*

POSITIONS OPEN

RESEARCH SCIENTISTS

Biosource Technologies, Inc., a leading plant technology company with its proprietary GENEWARE® system, has immediate openings for Research Scientists. Biosource is the world leader in virus-based gene expression systems for plants utilizing its GENEWARE system for rapid protein/RNA expression, systemic gene knockout, and high-throughput screening of genetic sequences via RNA viral replicons in higher plants. We are looking for exceptionally motivated and creative individuals to join our expanding research group. Our state-of-the-art Northern California research facility is located 30 minutes from the Napa Valley and 50 minutes from San Francisco.

We are seeking candidates at the Ph.D./M.S. level with expertise in combinations of RNA virology, cDNA library construction, high-throughput screening, and protein purification. Candidates with three to five years of relevant experience are encouraged to apply for two-year posts with the possibility of extension. Available projects include recombinant peptide production linked with large-scale purification, vector optimization using novel library strategies, and development of new vector/host expression systems.

Qualified candidates should submit a detailed curriculum vitae and the names of three references to: **Biosource Technologies, Inc., Department RS/GP, 3333 Vaca Valley Parkway, Suite 1000, Vacaville, CA 95688.** FAX: 707-446-8654 or submit materials electronically to: **Ms. Gina Melville, e-mail: gmelville@worldnet.att.net.** Review of applications will begin immediately and continue until positions are filled.

DIABETES RESEARCH

The Center for Diabetes Research, the Department of Medicine at Case Western Reserve University, and the VA Medical Center in Cleveland invite applications for a full-time faculty position (Ph.D. or M.D.) to study complications of diabetes. All research areas pertaining to diabetic complications are relevant. The successful candidate is expected to maintain a funded and independent research program. Applications should send curriculum vitae, statement of research interests, and three letters of reference to: **T. Kern, Ph.D., 434 Biomedical Research Building, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4951.** E-mail: diabetes@po.cwru.edu.

RESEARCH SCIENTIST DEPARTMENT OF SURGERY HARVARD MEDICAL SCHOOL

Seeking applicant with experience in epithelial cell culture and fluorescence imaging techniques, to work on issues related to ion transport in gastric mucosa. Applicants should have Ph.D. and three years of postdoctoral experience, with publication record sufficient to qualify for Instructor-level appointment. Position has opportunities for academic advancement and independent funding. Inquiries to: **David I. Soybel, M.D., Division of General and Gastrointestinal Surgery, 75 Francis Street, Boston, MA 02115.** E-mail: dmsoybel@bics.bwh.harvard.edu. *Equal Opportunity Employer.*

ASSISTANT PROFESSOR GENETICS AND MICROBIOLOGY

The Department of Biology, St. Andrews Presbyterian College, invites applications for a Visiting Assistant Professor (conversion to tenure-track possible) starting fall 1998. The successful candidate is expected to teach genetics, microbiology, courses in his/her specialty, supervise undergraduate research, and participate in the College's general education program. Ph.D. required. Deadline June 8, 1998. See website: www.sapc.edu/employ.html for job and application details. E-mail: jil@tartan.sapc.edu. *An Equal Opportunity/Affirmative Action Employer.*

Yale Nephrology seeks candidates with outstanding skills in patient care, teaching, and clinical scholarship for appointment as **ASSISTANT PROFESSOR** to tentatively start July 1, 1998. Extensive experience in ESRD care and strong record of accomplishment in clinical investigation are required. Please reply with curriculum vitae and references to: **Linda Chiaraluce, Associate Administrator, Department of Internal Medicine, Yale School of Medicine, P.O. Box 208029, New Haven, CT 06520-8029.** *An Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are particularly encouraged to apply.*

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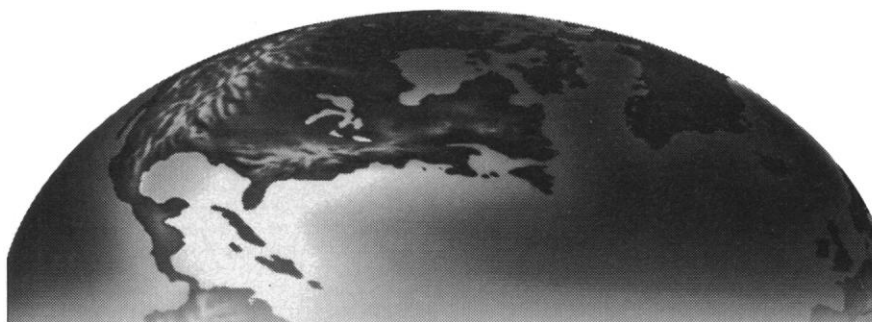
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As a global leader in life sciences, we're dedicated to addressing the food and health needs of a rapidly expanding world. Our breakthrough products and innovative technologies in the areas of agriculture, nutrition and health are helping people live longer, healthier lives. Our Ag Sector located in St. Louis, currently has the following opportunities available:

PLANT BIOCHEMIST/Cell Biologist - PROTEIN CHARACTERIZATION AND SAFETY CENTER

The successful candidate will be responsible for the development and application of strategies for the characterization of proteins expressed in plants. Working with Discovery Teams and Regulatory Affairs managers, this individual will develop protein characterization and safety data supporting the commercialization of plant biotechnology products worldwide.

Experience with enzymology, protein purification (including process-scale), heterologous gene expression, post-translational modifications, analytical detection methods, protein sequencing and protein engineering will be viewed positively. The position requires a Ph.D. in Biochemistry, Molecular Biology or Cell Biology, or an equivalent combination of education and experience. Knowledge of GLP and/or GMP is highly desirable. Exceptional communication and project management skills should be evident. **Job Code: PB/CB**

ANALYTICAL MOLECULAR BIOLOGIST (M.S./Ph.D)

We seek several highly motivated professionals who will work in an interactive team-based environment. The successful candidate will be responsible for the development and application of diagnostic analytical methods for the molecular characterization of genetically modified crops.

Significant experience with molecular diagnostic methods such as PCR and Southern blotting as well as molecular breeding are required. The responsibilities include the evaluation and implementation of new molecular diagnostic methods including enhancing the efficiency of high throughput DNA extraction and characterization. Experience with RFLPs, AFLPs, and marker-assisted plant breeding; and knowledge of good laboratory practices (GLP) will be an advantage. The ability to work in a team-based environment and interact with several different groups developing transgenic plants as products will be necessary. Excellent communication and leadership skills are a must. **Job Code: AMB**

IMMUNOASSAY ANALYSTS - AG REGULATORY

The successful candidates will be responsible for the development, validation and application of immunodiagnostic methods to determine the levels of protein(s) expressed in selected tissues of genetically improved crops using either existing immunodiagnostic methods or in conjunction with the development of new immunochemical methods. The position requires self direction, project coordination and management, and effective oral and written communication and participation in multi-disciplinary teams.

Qualified candidates will possess a degree in a Biological Science which is closely allied with Immunology, Microbiology or Biochemistry. A strong background in immunoassay development (ELISA, lateral flow, fluorescence, RIA) and industry experience is desired. Working knowledge of GLP or GMP, laboratory automation and PCs is considered a plus. The selected candidates will have excellent interpersonal and organizational skills, ability to adapt in a fast-paced and changing environment and a demonstrated ability to excel in a diverse team of highly motivated professionals. **Job Code: IA**

PLANT MOLECULAR ANALYSTS

The successful candidates will be responsible for the detailed molecular analysis of genetically modified plants using state-of-the-art analytical techniques.

These positions require BS/MS/Ph.D. scientists with superb plant molecular biology skills and 2 to 4 years of relevant experience. Specific responsibilities include the detailed characterization of DNA introduced into genetically modified plants using molecular techniques including: plasmid and genomic DNA isolation, Southern blot analysis, DNA probe construction, PCR and cloning. Knowledge of word processing, spreadsheet and DNA analysis software is essential. Experience with RFLPs, AFLPs, and marker-assisted plant breeding; and knowledge of good laboratory practices (GLP) will be an advantage. The ability to work in a team based environment and effective oral and written communication skills are assumed. **Job Code: PMA**

Calgene Inc., a subsidiary of Monsanto, currently has the following opportunity for an individual to join our organization located in Davis, CA:

REGULATORY (PROJECT) SCIENCE COORDINATOR

This position will oversee and coordinate the generation of data to support the safety assessment and registration of products improved through biotechnology at the Davis, CA location. This individual will work with global Regulatory Managers, project scientists and product development staff to ensure data generated during all R&D phases supporting product safety assessment meet the requirements of domestic and international regulatory agencies. This position will also coordinate the generation of safety data with contract laboratories and other colleagues within Monsanto. This position is responsible for the coordination and preparation of safety data reports. Additionally, this position will interface between St. Louis and Davis to ensure consistency in the data generated, as to protocols and the format of final reports. This individual will participate in the negotiation of data requirements with appropriate regulatory agencies.

This individual will be a member of specified project/product teams to provide regulatory guidance throughout the R&D stages to ensure data generated are consistent with regulatory requirements. Qualified candidates are expected to hold Bachelor's/Master's degree in a scientific discipline or equivalent with a minimum of 5 to 8 years related experience with a Bachelor's, or 2 to 5 years with a Master's and demonstrated working knowledge of scientific principles relevant to plant biotechnology. Possession of applicable experience related to the development of product safety data; ability to communicate effectively through both oral and written skills with a broad range of team members, regulatory agencies and scientific personnel required. **Job Code: RSPC**

If you are interested in the St. Louis-based positions (the first four positions only), please send your cover letter, resume and three references to: **Monsanto Life Sciences, Attn: Diana Kester, Job Code _____ (select from above), 700 Chesterfield Village Parkway, Mail Code: BB5F, Chesterfield, MO 63198; e-mail: diana.l.kester@monsanto.com.**

If you are interested in the California-based position (the last position only), please send your cover letter, resume and three references to: **Calgene, LLC, Attn: Human Resources, Job Code: RSPC, 1920 Fifth Street, Davis, CA 95616.**

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POSITIONS OPEN



NATIONAL PROGRAM LEADER, HUMAN NUTRITION. The Agricultural Research Service of the U.S. Department of Agriculture invites applications for the position of National Program Leader for Human Nutrition. This is a full-time, permanent position located in Beltsville, Maryland. The National Program Leader is responsible for leading and coordinating the Agency's research programs related to human nutrition. In addition to a degree in nutrition or related field, applicants must have a strong knowledge of nutrition and related areas; have the ability to plan, conduct, coordinate, and evaluate research programs; have skills to establish goals and priorities for an active and growing research program that is national in scope; represent the Agency to other governmental and private entities; and have the ability to organize and lead groups of technical experts. *Applicants must be U.S. citizens.* The closing date for the submission of applications is June 22, 1998. Program information is available by contacting: **Dr. Caird Rexroad, Telephone: 301-504-7050; FAX: 301-504-6191; e-mail: cer@ars.usda.gov.** Those interested in the position should contact: **Human Resources Division, Telephone: 301-504-1484** to request a copy of Vacancy Announcement ARS-X8B-8182 or electronically under job vacancies at **website: www.ars.usda.gov.** *USDA/ARS is an Equal Opportunity Employer.*

RESIDENT DIRECTOR OF RESEARCH

The Texas Agricultural Experiment Station seeks candidates for the position of Resident Director for the Texas A&M University Agricultural Research and Extension Center, El Paso, Texas. The Resident Director provides leadership for a multidisciplinary research faculty with the objective of developing effective systems to address environmental, urban, and rural agricultural opportunities of the people and industries of the Upper Rio Grande Valley. Research emphases include air and water quality as well as horticultural and agronomic crops in far West Texas. Candidates must have a Ph.D. in agricultural or life science and a minimum of five years of professional experience in agricultural research, extension, and/or teaching at the university level or the equivalent. Research management experience and peer-recognized research accomplishments preferred. Applications received by June 15, 1998, will receive preferential consideration. Position will be filled when a suitable candidate is identified. Submit résumé, names and addresses of three references, and other supporting documents to: **El Paso Search Committee, Human Resources Office, Texas Agricultural Experiment Station, College Station, TX 77843-2162.** *Equal Opportunity Employer.*

MOLECULAR DIAGNOSTICS/ CLINICAL CHEMISTRY Florida Gulf Coast University

Assists in curriculum; accredited self-study; policy, procedure, and course development; and student recruitment as well as teaching, service, and scholarly activities. Required: doctorate and molecular diagnostics/clinical chemistry experience; CLS experience; national certification; and Florida-licensed or -eligible. 12-month multi-year appointment basis. Starting date negotiable. Submit two packages, including a letter of interest, curriculum vitae, and list of five references postmarked by June 15, 1998, to: **Florida Gulf Coast University, Human Resources Department, Position #12401, 10501 FGCU Boulevard South, Ft. Myers, FL 33965-6565.** For additional information, call our jobline, **Telephone: 941-590-1111** or visit our website: **http://admin.fgcu.edu/hr/index.html; e-mail: crenk@fgcu.edu.** *An Equal Opportunity/Equal Access/Affirmative Action Institution.*

SENIOR SCIENTIST

Postdoctoral with benefits. MEG and EEG of human epilepsy and somatosensory function using dipole localization methods. Whole-head MEG with low temperature SQUIDS. Requires experience in applied mathematics, physiology, computation, and knowledge of cryogenic equipment. Send curriculum vitae to: **William W. Sutherling, M.D., Director, Neuromagnetism Laboratory, Huntington Medical Research Institutes, 10 Congress Street, Suite 505, Pasadena, CA 91105.** E-mail: **sutherling@msn.com; FAX: 626-792-7336.**

POSITIONS OPEN

RESEARCH SCIENTIST/TEAM LEADER HARVARD MEDICAL SCHOOL CHILDREN'S HOSPITAL

A position available immediately to study the biochemistry, cell biology, and molecular genetics of serine proteinase inhibitors (serpins) implicated in apoptosis, tumor cell invasion, and intracellular protein processing. This Ph.D. scientist should have a strong background in biochemistry, enzyme kinetics, protein purification, and cell/molecular biology. Strong preference for candidates with excellent communication skills and a proven track record of leading highly interactive laboratory team. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Gary A. Silverman, M.D., Ph.D., Harvard Medical School, Children's Hospital, 300 Longwood Avenue, Enders 970, Boston, MA 02115.** FAX: 617-355-7677; e-mail: **silverman_g@a1.tch.harvard.edu.**

ADVISOR/LABORATORY COORDINATOR.

Idaho State University, Department of Biological Sciences, announces a 10-month continuing position for an Academic Advisor and Laboratory Coordinator, contingent upon funding, commencing August 1998. The successful candidate must hold a minimum of a Master's degree in the biological sciences and will advise biological sciences students, be responsible for the dissemination of advising information to students in the biological sciences, coordinate introductory laboratories, and organize meetings designed to evaluate and coordinate the introductory curriculum. Responsibilities may include teaching in introductory courses. The position will remain open until filled. Please send a letter of application, curriculum vitae, and a statement of teaching experience, and teaching philosophy. Also have three letters of recommendation sent by June 30, 1998, to: **Advisor/Laboratory Coordinator, Department of Biological Sciences, Box 8007, Idaho State University, Pocatello, ID 83209-8007.** For information about the department see website: **http://www.isu.edu/departments/bios.** *Idaho State University is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK SCIENTIST CELLULAR, MOLECULAR, OR DEVELOPMENTAL NEUROBIOLOGY NINDS, NIH

The Intramural Program of NINDS invites applications to fill a tenure-track research position at the NIH. We are seeking exceptional candidates to establish an independent and imaginative research program in cellular, molecular, or developmental neurobiology, preferably but not necessarily, in mammalian systems. A Ph.D. or M.D. and two or more years of productive postdoctoral experience are required. Research support (positions, laboratory budget, and space) will be provided by NINDS. The salary and research resources will be commensurate with the qualifications and experience of the candidate.

Applicants should send curriculum vitae, bibliography, statement of research interests, and the names of three references to: **Dr. Story Landis, c/o Claudia Palumbo, Building 31, Room 8A23, NINDS, NIH, 31 Center Drive, MSC 2540, Bethesda, MD 20892-2540.**

Applications must be postmarked July 15, 1998. *NIH is an Equal Opportunity Employer.*

DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS CASE WESTERN RESERVE UNIVERSITY School of Medicine

Applications are invited for positions as **INSTRUCTORS, RESEARCH ASSOCIATES, and POSTDOCTORAL FELLOWS** to join existing researchers in a large, diversified, but highly interactive department. The areas of strength are signal transduction, molecular biology of membrane proteins, structural biology, channel regulation, cell motility, and systems integrated physiology. We offer an outstanding scientific environment, state-of-the-art facilities, and very competitive recruitment packages. Send curriculum vitae and the names of three references to: **Dr. Antonio Scarpa, Department of Physiology and Biophysics, 10900 Euclid Avenue, Cleveland, OH 44106-4970.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN



USDA, REE, Agricultural Research Service, Avian Disease and Oncology Laboratory (ADOL), East Lansing, Michigan, seeks a permanent, full-time Supervisory Veterinary Medical Officer, Microbiologist, or Research Molecular Geneticist to serve as **RESEARCH LEADER and LOCATION COORDINATOR.** The incumbent will be responsible for all aspects of ADOL management including research on current and emerging avian tumor viruses, genome mapping, and the evaluation of genes relative to disease resistance; fiscal and administrative accountability; interaction with USDA administrators and national poultry industry leaders. The incumbent will maintain a research program in his/her area of specialty. *U.S. citizenship and a D.V.M., Ph.D., or directly related professional experience is required.* Salary commensurate with experience (\$64,998 to \$99,397). Comprehensive benefits package includes paid sick and annual leave, life and health insurance, and a savings and investment plan (401k type) in addition to the federal retirement plan. For information on the research program and/or position contact: **Dr. R. Silva, Telephone: 517-337-6828; e-mail: silvar@pilot.msu.edu.** For information on the application procedure contact: **Marilyn Stetka, Telephone: 301-504-1388.** Applications must be marked **ARS-X8N-8107** and postmarked by June 15, 1998. *USDA/ARS is an Equal Opportunity Employer.*

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

RESEARCH SCIENTIST sought by The Institute for Bird Populations to conduct analyses of data and publish results from MAPS (Monitoring Avian Productivity and Survivorship), a continent-wide program designed to determine causes of population change in landbirds. The successful candidate will have demonstrable strengths in biometry, mark-recapture modeling, and life-history theory and knowledge of landbird biology and GIS applications. Ph.D. required; postdoctoral experience desirable. \$40,000 to \$42,000 plus benefits. Send letter of application, curriculum vitae, two reprints, two letters of recommendation, and two other references to: **David F. DeSante, Institute for Bird Populations, P.O. Box 1346, Pt Reyes Sta, CA 94956.** Telephone: 415-663-1436.

RESEARCH FELLOW position in surgical oncology. Conduct research on genetics and regulation of glutamine in human tumor cells and animal tumor models. M.D. or Ph.D. with minimum of three years of experience in cell culture, experimental tumor models, and molecular biology techniques. Knowledge of cellular metabolism and successful publication record desired. Available July 1998. Salary \$22,000. Send curriculum vitae and reference list to: **Dr. Steve F. Abcouwer, Massachusetts General Hospital, Surgical Oncology Research Laboratories, GRJ918, 55 Fruit Street, Boston, MA 02114.**

POSTDOCTORAL POSITION available to study heart and nervous system development in *Drosophila* and mice. Candidates with experience in molecular genetics and transgenic techniques will be given preference. Please send curriculum vitae and three letters of reference to: **Dr. Rolf Bodmer, University of Michigan, 830 North University, Ann Arbor, MI 48109-1048.** E-mail: **rolf@umich.edu.**

EUROPEAN OPPORTUNITIES



**United Nations Educational
Scientific and Cultural
Organization is currently
filling the position of
Director, Division
of Basic Sciences
UNESCO HEADQUARTERS,
PARIS**

Main Responsibilities

Ensure the promotion, planning, coordination, and implementation of UNESCO's programme for the advancement, transfer, and sharing of knowledge in the basic sciences related to university-level education and research, as well as fund raising. The successful candidate will also be expected to advise UNESCO's Member States on, and assist in, the development of their programmes in basic sciences.

Requirements

- Ph.D. in one of the basic sciences.
- At least 10 years experience in relevant research and five years at managerial level, with international recognition.
- Proven leadership qualities and excellent organizational skills are essential.
- Experience of the United Nations system is an asset.
- Excellent knowledge of English and good knowledge of French.

Salary and benefits

The post carries grade D-1 common to the UN system, which includes a salary in the *range of \$92,000 (with dependents) — \$86,000 (without dependents) exempt from all direct taxation and an international benefits package.*

Candidates should address a detailed curriculum vitae in English or French, attaching an identity photograph to, **UNESCO, Chief, Recruitment Section, Bureau of Personnel, 7 place de Fontenoy, 75352 Paris 07-SP, France**, no later than 1 July 1998. Only those candidates being seriously considered will receive an acknowledgment of their application. **Please quote no. SC-056.**



B.S./M.S. BIOLOGISTS

Pharmacia & Upjohn is among the world's largest pharmaceutical companies. We are involved in research areas such as Oncology, Infectious, Metabolic, and Central Nervous System diseases to help people live longer and fuller lives. To support our C.N.S. research activity, Pharmacia & Upjohn is seeking to fill 6 positions with candidates who have experience and expertise in Cellular Neurobiology, Neuromolecular Biology, Biochemical Neuropharmacology, Neuroanatomy, or Protein Molecular Biochemistry.

Successful candidates will work in laboratories and provide direct input to integrated research teams seeking novel therapies for Alzheimer's disease, Parkinson's disease, migraine, schizophrenia, anxiety, and depression. Strong communication and problem-solving skills plus integrity, perseverance, good judgment, and a drive for results are essential. These positions require BS/MS or equivalent in the appropriate fields plus 2-5 years of relevant experience.

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GLOBAL OPPORTUNITIES

Higher Education Division

School of Engineering and Science

Postdoctoral Fellow in Ultra-Fast Laser Spectroscopy

Position Number: 20914

Hawthorn campus, Victoria, Australia

Duties: Make a significant contribution to and augment the current research capabilities of the Femtosecond Laser Spectroscopy Facility. Participate in running the research program associated with the Facility, to pursue research funding opportunities and publications and to supervise or mentor students and staff as required.

Qualifications: A PhD in Chemistry or Physics and a strong background in laser spectroscopy, preferably with femtosecond or picosecond lasers. Demonstrated skills in optic, vacuum technology, computing and preferably electronics. Well developed skills in project conception and development, including an ability to make connections to related projects in other areas. Highly developed analytical, planning and monitoring skills and the ability to complete complex assignments with minimal supervision.

Tenure: Full time, fixed term 2 year appointment, effective immediately

Salary: Academic Level B: \$A46,995 - \$A55,806 p.a.

Closing Date for Applications: 5 June 1998

To obtain a position description please telephone the **Swinburne University of Technology** Human Resources fax back/voice mail facility on +61 3 9214 5060 and quote the position number. <http://www.swin.edu.au/hr/posvac/external.htm>

Swinburne



POSITIONS OPEN

A **POSTDOCTORAL POSITION** will be available in the summer of 1998 to work on lymphocyte development and activation with an emphasis either on the roles of complement receptors (CD21 and CD35), or redox regulation, in the normal immune response and autoimmunity. Projects designed to characterize the cell biology and immunologic mechanisms in these disciplines are available in human and mouse systems. Research approaches focus on molecular biologic in addition to cellular immunologic and genetic methodologies. The training environment benefits from strong collaborative arrangements within the combined Immunology Program at University of Colorado Health Sciences Center, Barbara Davis Center for Diabetes, and the National Jewish Center for Immunology. A strong background in molecular structure-function, biochemistry, or cellular immunology is required. Please send curriculum vitae and the names of three references to: **Dr. V. Michael Holers, Departments of Medicine and Immunology, Box B-115, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262.** An Equal Opportunity Employer.

Tenure-track, **ASSISTANT PROFESSOR** of medicine position in the Division of Infectious Diseases, Department of Medicine, University of California, San Diego. Applicants must be capable of carrying on independent, high-quality laboratory research, preferably in parasitology, as evidenced by peer-reviewed funding or high-quality publications. Twenty percent of time will be devoted to clinical duties. Must be Board-certified/eligible in infectious diseases and have a California license or be eligible to apply. Salary commensurate with experience, training, and established UCSD salary scales. Send curriculum vitae by June 12, 1998, to: **Joshua Fierer, M.D., Chief, Infectious Diseases Section, 111-F, VA San Diego Healthcare System, 3350 La Jolla Village Drive, San Diego, CA 92161.** Affirmative Action/Equal Opportunity Employer.

PART-TIME MICROSCOPE SALES/SCIENTISTS

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

Send résumé to:

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

POSTDOCTORAL POSITION available immediately in macromolecular crystallography of complexes between catalytic RNAs and protein cofactors. Project involves collaboration between laboratories accomplished in RNA biochemistry and protein crystallography. Experience in crystallography or RNA science preferred. U.S. citizenship or permanent resident status required. Send curriculum vitae and the names of three references to: **Kevin Weeks, Department of Chemistry, University of North Carolina, Chapel Hill, NC 27599-3290** or **Traci Hall, NIEHS, MD F3-01, P.O. Box 12233, Research Triangle Park, NC 27709.** E-mail: weeks@unc.edu, hall4@niehs.nih.gov.

RESEARCH ASSOCIATE IN REMOTE SENSING AND LANDSCAPE ECOLOGY

Opening for a Scientist (M.S. or Ph.D. level) with expertise in remote sensing, GIS, and ecology to work in a NASA-funded study of biodiversity and land use in the Greater Yellowstone Ecosystem. Contact: **Dr. Andrew Hansen, Biology Department, Montana State University, Bozeman, MT 59717.** E-mail: hansen@montana.edu by 15 June 1998. ADA/Affirmative Action/Equal Opportunity/Veterans preference.

RESEARCH ASSOCIATE ORGANIC CHEMIST

Experience in peptide synthesis and coupling of proteins to other compounds to join ongoing research project in support capacity. Ph.D. or commensurate experience. Salary negotiable. Send curriculum vitae and three references to: **The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037, Attn: ER.** Equal Opportunity Employer.

POSITIONS OPEN

The Division of Hematology at Duke University Medical Center, Durham, North Carolina, has several **POSTDOCTORAL RESEARCH FELLOWSHIP** positions available for research in the areas of sickle cell anemia, transfusion, coagulation, and thrombosis. *Candidates must be U.S. citizens or permanent residents and be eligible for at least two years of funding on NIH/NRSA training grants.* Available positions:

Charles Greenberg, M.D.: role of coagulation in sickle cell anemia.

William Kane, M.D., Ph.D.: structure/function relationships of coagulation factor V.

Thomas Ortel, M.D., Ph.D.: coagulation factor VIII inhibitors; antiphospholipid antibodies.

Marilyn Telen, M.D.: adhesion molecules in sickle cell anemia; immunology of transfusion reactions.

J. Brice Weinberg, M.D.: role on NO in malaria; role of NO in inflammation.

Applicants should contact: **Marilyn Telen, M.D., Professor and Chief, Division of Hematology, Box 2615, Duke University Medical Center, Durham, NC 27710.** FAX: 919-681-7688; e-mail: telen002@mc.duke.edu.

Duke University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION IN MACROPHAGE IMMUNOBIOLOGY

University of California, San Diego

A Postdoctoral position is available for studies on CD40L-macrophage interactions at the University of California, San Diego. Based on our finding that CD40L activates macrophages to produce HIV-suppressive beta-chemokines (PNAS, in press), we are evaluating the regulation of CD40L on T cells in HIV infection, tuberculosis, and malignancy. Requirements are a broad knowledge of current biomedical research, a strong foundation in immunology and molecular biology, dedication, a positive attitude, and a desire to learn in a challenging but supportive environment. Apply by sending a statement of research experience, interests, and future plans; curriculum vitae; and the names of three references to: **Richard S. Kornbluth, M.D., Ph.D., Department of Medicine—0679, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0679.** FAX: 619-552-7445; e-mail: rkornbluth@ucsd.edu.

Two **POSTDOCTORAL POSITIONS** available at the Hormel Institute, University of Minnesota, Austin, Minnesota, to study the signal transduction in tumor promotion (MCB 16:6427, 1996; JBC 271:9942, 1996; JBC 271:3126, 1996; JBC 272:4187, 1997; JBC 272:9962, 1997; JBC 272:26325, 1997; JBC 272:27753, 1997; PNAS 94:5826, 1997; PNAS 94:11957, 1997; PNAS 95:156, 1998). We are seeking self-motivated Ph.D.'s with experience in biochemistry, molecular and cellular biology. Experience in gene cloning and signal transduction systems is a plus. Please send your curriculum vitae and the names and telephone numbers of three references to: **Dr. Zigang Dong, The Hormel Institute, University of Minnesota, 801 16th Avenue N.E., Austin, MN 55912.** FAX: 507-437-9606; e-mail: zgdong@smig.net. These positions will remain open until qualified candidates are found. The University of Minnesota is an Equal Opportunity Educator and Employer.

POSTDOCTORAL POSITION available in July 1998 to study protein-protein interactions regulating the hematopoietic stem cell transcription factor SCL/tal. Opportunity provided to participate in an ongoing, productive effort to correlate structure and function in factors responsible for programming stem cell development and leukemogenesis (J. Biol. Chem. 271:2683, 1996; J. Biol. Chem. 273:2866, 1998). Experience in molecular and cell biology required. Send curriculum vitae and names of three references to: **Dr. Adam Goldfarb, c/o Jane Adair, Department of Pathology, University of Virginia Health Sciences Center, Box 214, Charlottesville, VA 22908.** The University of Virginia is an Affirmative Action/Equal Opportunity Employer.

SPERMATOGENESIS GERMLINE GENE THERAPY

A **POSTDOCTORAL POSITION** is available to work on characterization and culture of spermatogonia. Must have experience with tissue culture and molecular biology. Ability to speak and write English fluently is preferred. Send curriculum vitae and statement of research interests to: **H. A. Gritsch, M.D., UCLA Department of Urology, Box 951738, Los Angeles, CA 90095-1738.** E-mail: agritsch@urology.medsch.ucla.edu. UCLA is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL LUNG CHEMISTRY AND BIOLOGY

Applications are invited for Postdoctoral positions in the University of California, Davis (UCD) Center for Comparative Lung Biology and Medicine (CCLBM) to work with **Dr. Albert van der Vliet, Dr. Barry Halliwell, and Dr. Carroll E. Cross** studying the effects of environmental pollutants (including tobacco smoke) and endogenous oxidants (especially nitrogen oxides) on lung cell biology. Join a multidisciplinary team which combines free radical chemistry, cell biology, and analytical chemistry. Applicants should have a relevant Ph.D. and preferably have expertise in one or more of the following: cell culture, immunochemistry, gene transfection and transgenics, and analytical techniques (HPLC, GC/MS). Collaborative research opportunities exist with other UCD CCLBM members and with **Dr. Halliwell's Kings College London Laboratory.** Résumé and names of references should be forwarded to: **C. E. Cross, University of California, Davis Lung Biology Center, Room 1121, Surge I Annex, University of California, Davis, CA 95616.**

POSTDOCTORAL RESEARCH POSITIONS IN MICROBIOLOGY

American Society for Microbiology/
National Center for Infectious Diseases

Positions are available for Postdoctoral Scientists to conduct novel research with the overall objective of developing practical applications of microbiology, immunology, and epidemiology for diagnosis and prevention of infectious diseases. Associates will perform research in residence at the National Center for Infectious Diseases, which is headquartered at the Centers for Diseases Control and Prevention in Atlanta, Georgia.

Deadline for applications is November 15, 1998. Website: <http://www.asmusa.org/edusrc/edu23e.htm>; e-mail: fellowships_careersinformation@asmusa.org.

POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL

Regulation of cell proliferation and differentiation in hematopoiesis and leukemia. Applicants should have a strong background in molecular biology, biochemistry, or cell biology, and are interested in using yeast two-hybrid approach to study protein interaction and knock-out technique to analyze gene function. Send curriculum vitae including names of three references to: **Dr. Dong-Er Zhang, Room 953, Harvard Institutes of Medicine, 4 Blackfan Circle, Boston, MA 02115 USA.** E-mail: dzhang@bldmc.harvard.edu.

POSTDOCTORAL FELLOW. Cell biology, Yale University School of Medicine. Postdoctoral position available to join ongoing studies of the interaction of leukocytes and the Lyme spirochete, *Borrelia burgdorferi*. Experience to include cell and molecular biology, biochemistry, and immunology. NIH training grant support requires that the candidate have permanent residency or U.S. citizenship. Send letter of interest, names of three references, and curriculum vitae to: **Stephen E. Malawista, M.D., Department of Internal Medicine, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE. Conduct research experiments on the molecular biology and biochemistry of insulin-like hormones in a developing insect. Ph.D. in biology or biochemistry with emphasis on routine techniques in molecular biology such as PCR, screening, sequencing, blotting, and preferably some experience in techniques associated with eukaryotic expression and *in situ* hybridization. Send résumé to: **Dr. Wendy Smith, Northeastern University, 112 Hayden Hall, Boston, MA 02115.** FAX: 617-373-8589; e-mail: w.smith@nunes.edu. Northeastern is an Equal Opportunity/Affirmative Action/Title IX Employer.

POSTDOCTORAL FELLOWS. University of Arkansas for Medical Sciences (UAMS) Pain Neurobiology Laboratory committed to research on long-term effects of pain is seeking Fellows with experience in molecular/anatomical methods, handling rat pups, image capture, and quantification of cell staining/ISH data. Salary/rank commensurate with experience, excellent benefits. Send curriculum vitae and three references to: **K. S. Anand, Arkansas Children's Hospital, S-431, 800 Marshall Street, Little Rock, AR 72202.** E-mail: anandsunny@exchange.uams.edu. UAMS is an Equal Opportunity/Affirmative Action Employer.

Serono Pharmaceutical Research Institute S.A.



The Institute is an affiliate of the Ares-Serono Group, which has its Executive Headquarters in Geneva and is a leading multinational engaged in research, development, and marketing of products in the biotechnology field. The Institute is a state-of-the-art centre of scientific excellence and its research is directed toward the discovery of novel molecular mechanisms that can be used as drug targets to treat serious diseases.

A challenging and exciting opportunity exists for a

BIOCHEMICAL PHARMACOLOGIST

with the Lead Discovery Group. Applicants will have a Ph.D. in biochemistry, pharmacology, or a related discipline. They will also have 3–4 years experience in the design, validation, and implementation of both *in vitro* and cell-based biochemical assays for use in high-throughput drug screening campaigns. Familiarity with compound profiling, pharmacophore modeling, and scaffold selection would be a plus.

The position requires a strong background in 7-TM receptor, enzyme, and ion channel pharmacology. As part of the Lead Discovery Group, the successful candidate will participate in the implementation of novel, systems-based approaches to drug discovery as well as drive drug discovery programs in the fields of CNS and Immunology. For this means, the applicant will work closely with the Company's biology, chemistry, and *in vivo* pharmacology departments.

Informal enquiries concerning the position can be directed by e-mail to denis.church@serono.com.

If you are interested, please send your curriculum vitae with a list of publications and the names of three references to the Personnel Department of the Institute.

Serono Pharmaceutical Research Institute S.A.

14, chemin des Auix
1228 Plan-les-Ouates
Geneva/ Switzerland

Telephone:
+41 22 706 96 66

Telefax:
+41 22 794 69 65

Microbiologist Positions in Switzerland

The Swiss Federal Institute for Environmental Science and Technology (EAWAG) is a research institute specialized in basic and applied research, with water and aquatic systems as central focus. The EAWAG is part of the federal university system (Swiss Federal Institutes of Technology, ETH). Our activities offer exciting opportunities for motivated and creative researchers to join our team. Currently, we have three openings:

1. Bioenergy/Drinking Water, staff position (research and teaching)—emphasis on transport in and out of the cell, willing to apply research to drinking water.
2. Microbial Adhesion/Biofilm, position limited to 6 years (research and teaching)—emphasis on molecular mechanisms of microbial adhesion.
3. Postdoctoral Associate: Microbial Ecology, a 2- or 3-year position—research in microbial processes in aquatic systems.

Requirements: Ph.D. degree, postdoctoral experience preferred (position 1 & 2). Peer-reviewed publications are considered the strongest evidence of active research contribution to the discipline. Only those fully committed to productive scholarship should apply.

Salaries: Highly competitive, the amount dependent upon qualifications and experience.

Facilities: Position 1 & 2 will be housed in the Department of Microbiology in the main EAWAG facility at Duebendorf, close to Zurich. The postdoctoral associate will be located at the Department of Biogeochemistry at the Limnological Research Center at Kastanienbaum, on the shore of Lake Lucerne. Excellent resources are available for research and teaching. Possibilities for interdisciplinary research are outstanding and encouraged.

Application: Position 1 is available starting January 1, 1999; positions 2 & 3 starting October 1, 1998. Send a letter of application, a curriculum vitae, and three letters of reference not later than July 31, 1998, to: **Professor Alexander J. B. Zehnder, Director, EAWAG, CH-8600 Duebendorf, Switzerland**. For additional information, please see www.eawag.ch/info/misc/positions.html. The search may be extended if suitable candidates are not found.



Pharmaceutical
and Cosmetics
Company

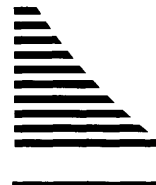
**Pierre
Fabre**



7000 staff

annual turnover:

6,1 Billion FF



The Institut de Recherche
Pierre Fabre
has a vacancy for a

PHARMACOLOGIST

at its modern research
facility at Castres, near
Toulouse (France)

Qualified to PhD level with experience in cardiovascular research and hemodynamic techniques, you will play an active role in research projects aimed at the discovery of innovative new drugs. Working in collaboration with other high calibre scientists, you will manage a small group in recent outstandingly equipped laboratories.

*Please send your CV and covering letter (ref. D44/SI) to **Pierre Fabre Médicament**, Human Resources Department, Parc Industriel de la Chartreuse, 81106 Castres Cedex, France.*

e-mail : christine.deydier@pierre.fabre.fr

POSITIONS OPEN

COMPUTATIONAL/SIMULATION POSTDOCTORAL/VISITING SCIENTISTS

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

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

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

Two POSTDOCTORAL POSITIONS. NIEHS, NIH has two Postdoctoral positions available starting approximately October 1, 1998, to investigate structure-activity, requirements for substrate specificity of the CYP2C enzymes using cDNA expression systems in bacteria. Technical experience in molecular genetics and protein biochemistry is needed in several of the following areas including site-directed mutagenesis and construction of chimeras, use of cDNA expression systems such as bacteria, cloning techniques, DNA sequencing, and protein biochemistry. Experience with molecular modeling techniques and/or CYP enzymes beneficial. Requires a Ph.D. in biochemistry, molecular genetics, microbial genetics, or related field. Applicant must have less than five years of postdoctoral experience. The initial appointment is renewable up to five years with a starting salary of at least \$26,500 depending on experience. Applicants should submit a curriculum vitae and three references to: Joyce Goldstein (A3-02), NIEHS, P.O. Box 12233, Research Triangle Park, NC 27709. Telephone: 919-541-4495; FAX: 919-541-3647; e-mail: goldstel@niehs.nih.gov.

POSTDOCTORAL POSITIONS

Two Postdoctoral positions in mechanistic enzymology/NMR spectroscopy are available immediately to study the mechanisms of DNA repair glycosylases. Previous experience in the study of enzymatic mechanisms or heteronuclear NMR spectroscopy is desired. Closing date for applications is June 1, 1998. Please send a cover letter, curriculum vitae, and the names of three references to: Dr. James T. Stivers, Center for Advanced Research in Biotechnology, University of Maryland System, 9600 Gudelsky Drive, Rockville, MD 20850.

The University of Maryland Biotechnology Institute is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and candidates with disability are encouraged to apply.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE/INSTRUCTOR University of Colorado Health Sciences Center

To carry out research in three project areas: (1) control of apoptosis in prostate cancer, (2) regulation of differentiation of human leukemic cells, and (3) control of myeloid growth by GM-CSF. Emphasis on protein kinase and phosphatase pathways. Please send curriculum vitae to: Dr. Andrew S. Kraft, Chief, Division of Medical Oncology, 4200 East 9th Avenue, Denver, CO 80262. FAX: 303-315-5502.

POSTDOCTORAL POSITION available immediately to develop miniaturized electrophoretic analysis devices and microfluidic sample preparation methods for DNA diagnostics and sequencing. Experience in bioanalytical and/or biophysical chemistry desired. Send résumé and three references by June 15, 1998, to: Prof. Richard A. Mathies, Chemistry Department, University of California, Berkeley, CA 94720. The University of California is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL TRAINING IN CELL AND MOLECULAR BIOLOGY OF REPRODUCTION

The Center for Biomedical Research of the Population Council offers Postdoctoral Training in cell and molecular biology of reproduction. Research interests of our training faculty include (name, title/role, areas of research):

James F. Catterall. Senior Scientist/Director. Cell-specific regulation of gene expression by androgens; apoptosis in spermatogenesis.

Indrani Bagchi. Scientist. Molecular mechanism of blastocyst implantation.

Milan Bagchi. Scientist. Nuclear receptor structure and function; transcriptional regulation.

Ching-Ling C. Chen. Senior Scientist. Regulation of testis-specific genes by GATA transcription factors; the pituitary-testicular axis.

C. Yan Cheng. Senior Scientist. Biochemistry and physiology of testicular proteins; cell-cell interaction.

Matthew P. Hardy. Scientist. Developmental biology of Leydig cells; stress and Leydig cell function.

Patricia L. Morris. Scientist. Sertoli cell-germ cell interaction; JAK-STAT signal transduction; regulation of Leydig cell function.

The Center for Biomedical Research is located on the campus of Rockefeller University and provides excellent facilities for research and an outstanding scientific environment for postdoctoral training. Please send curriculum vitae and names and addresses of three references to: The Fellowship Secretary, Population Council, Center for Biomedical Research, 1230 York Avenue, New York, NY 10021 USA. E-mail: jatterall@popcbr.rockefeller.edu. Applications from women and minorities are encouraged.

POSTDOCTORAL POSITION available immediately (Ph.D. or M.D.) for research training in endocrinology and metabolism. The applicant must be a U.S. citizen or permanent citizen to be eligible for this NIH-funded position. Prior experience in basic molecular techniques is highly desirable. Research areas include characterizing novel genes mediating tumorigenesis, cancer progression, and differentiation using both an *in vivo* model (knockout mice) and *in vitro* system (cell culture). A second area of research focuses upon steroid/neurosteroid mechanisms of neuroprotection and control of apoptosis in neuronal cell culture systems. Training in molecular biology emphasizing RNA/DNA analyses, PCR, cell culture, knockout animals. Interested applicants should send a curriculum vitae and three letters of reference to: Dr. Janet Amico, Division of Endocrinology, University of Pittsburgh School of Medicine, E1140 Biomedical Science Tower, Pittsburgh, PA 15261. FAX: 412-648-3290; e-mail: jamico+@pitt.edu. The University of Pittsburgh is an Affirmative Action/Equal Opportunity 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. MSKCC is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS at Harvard Medical School/Brigham and Women's Hospital available to study the cellular and molecular mechanisms of autoimmune tissue injury. Experience in immunology and/or molecular biology required. Send résumé and three references to: Dr. Vicki Rubin Kelley, Harvard Institutes of Medicine, 77 Avenue Louis Pasteur, Boston, MA 02115. FAX: 617-525-5830; Telephone: 617-525-5915; e-mail: vicki@bustoff.bwh.harvard.edu. HMS/BWH are Equal Opportunity Employers.

POSTDOCTORAL POSITIONS available July 1, 1998, for strongly motivated individuals to study various facets of the molecular and cell biology of selectins and their ligands. Significant experience in molecular biology, particularly regulation of gene expression, strongly desired. Send complete curriculum vitae, names, telephone, e-mail of three references to: Dr. Geoffrey Kansas, Department of Microbiology—Immunology, Northwestern Medical School, 303 East Chicago Avenue, Chicago, IL 60611. E-mail: gsk@nwu.edu.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP DALHOUSIE UNIVERSITY AND GLAXO WELLCOME INC.

A Postdoctoral Research Fellowship position funded by Glaxo Wellcome (Canada), a leading Canadian pharmaceutical company, is currently available to study vesicle-mediated intracellular trafficking events. Candidates should have a Ph.D. and a strong background in biochemistry and cell biology with demonstrated expertise in routine molecular biology techniques. Research will be performed at the Atlantic Research Centre at Dalhousie University in historic Halifax, Nova Scotia, Canada. The project will be supervised primarily by Dr. Neale Ridgway and Dr. Christopher McMaster with input from other Senior Investigators within the Centre, including Dr. Harold Cook and Dr. David Byers. Glaxo Wellcome resources, both theoretical and practical, will also be made available. The Fellowship and the research conducted are non-discretionary and hence results produced will be published as they emerge. Please send a complete curriculum vitae including present address, education, publication list, awards received, and the names and contact information for three professional references to: Dr. Christopher McMaster or Dr. Neale Ridgway, Dalhousie University, 5849 University Avenue, Room C-302, Halifax, Nova Scotia B3H 4H7 Canada. E-mail: arc@dal.ca.

LABORATORY TECHNICIAN POSTDOCTORAL POSITION AVAILABLE IMMEDIATELY

The Derald H. Ruttenberg Cancer Center at the Mount Sinai School of Medicine has positions for Laboratory Technician and Postdoctoral Fellow, available immediately to highly motivated and qualified applicants. Candidates will perform research on molecular mechanisms of cancer. Postdoctoral Fellow position requires a Ph.D. or M.D. with a strong background in molecular biology and biochemistry. Technician position requires a B.S. or M.S. in biology with training in molecular biology and/or biochemistry. Please send curriculum vitae and letters of recommendation to:

Xiangwei Wu, Ph.D.
Ruttenberg Cancer Center
Mount Sinai School of Medicine
One Gustave L. Levy Place
Box 1130
New York, NY 10029-6574
FAX: 212-849-2446

POSTDOCTORAL POSITION

A Postdoctoral position is available immediately to work in the area of cellular and molecular biology of apo E. Experience in PCR, cloning, and expression in eukaryotic cells is essential. Additional experience in *in vitro* translation or cell fractionation is an asset. Submit letter, curriculum vitae, and names of references to: Ladislav Dory, Ph.D., Department of Molecular Biology and Immunology, University of North Texas Health Science Center at Fort Worth, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107. FAX: 817-735-2133; e-mail: ldory@hsc.unt.edu.

Equal Employment Opportunity/Affirmative Action Institution.

POSTDOCTORAL POSITION M. D. ANDERSON CANCER CENTER

Two NIH-funded positions available immediately in the areas of mammalian recombinational DNA repair or cell cycle checkpoint responses. Expertise in molecular biology and/or biochemistry required. Salary is competitive and commensurate with experience. Send curriculum vitae and three reference names to: Dr. Randy Legerski, Department of Molecular Genetics, University of Texas M. D. Anderson Cancer Center, Houston, TX 77030. E-mail: randy_legerski@molgen.mdacc.tmc.edu.

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

POSITIONS OPEN

ANTIMICROBIAL PEPTIDES REGULATION OF EXPRESSION AND MECHANISMS OF ACTION University of California, Irvine

Three **POSTDOCTORAL POSITIONS** are immediately available in the University of California, Irvine Department of Pathology for studies on mammalian antimicrobial peptides (see: *FASEB J.* 10:1280-1289; 1996). Innovative Investigators are sought to expand ongoing studies on the peptide gene expression and mechanisms of antimicrobial action. Individuals with experience in the following areas are encouraged to apply: solid phase peptide synthesis; heterologous protein expression in bacterial, yeast, or mammalian cell systems; site-directed mutagenesis; cDNA and genomic cloning; interactions of peptides with model membranes. Send curriculum vitae, summary of research experience and interests, and names of three references to: **Dr. Michael E. Selsted, Department of Pathology, College of Medicine, University of California, Irvine, CA 92697-4800.** The University of California is an Equal Opportunity Employer committed to excellence through diversity.

RESEARCH ASSOCIATE POSITIONS MOLECULAR PHYSIOLOGY

Two positions are immediately available to study structure, function, and regulation of ion channels involved in Ca²⁺ signaling and necrotic/apoptotic cell death. One position requires prior experience with electrophysiological/patch-clamp techniques. The second position requires experience with protein isolation/purification, antibody production, and/or reconstitution techniques. Please send curriculum vitae, pertinent reprints, and the names and contact numbers of three references to: **Dr. William P. Schilling, Case Western Reserve University, MetroHealth Campus, Rammelkamp Center-Room R322, 2500 MetroHealth Drive, Cleveland, OH 44109-1998.** E-mail: weschilling@metrohealth.org. Equal Opportunity Employer.

POSTDOCTORAL POSITION CELL BIOLOGY/MOLECULAR BIOLOGY

Position available immediately at the Centers for Disease Control and Prevention, Atlanta, Georgia, for pursuit of independent research in the area of the pathogenesis, evolution, and genetic variation of HIV. The successful candidate must have advanced training in cell and molecular biology to aid in developing molecular techniques for studying the pathogenesis of HIV infections and to aid in the development of novel approaches to identify molecular events involved in the generation of viral diversity. Send curriculum vitae or contact: **Dr. Marcia Kalish, Centers for Disease Control and Prevention, 1600 Clifton Road N.E., Mailstop G-19, Atlanta, GA 30333.** E-mail: mlk3@cdc.gov; Telephone: 404-639-1024.

POSTDOCTORAL POSITION in molecular genetics of breast cancer and angiogenesis in breast cancer. Studies of gene expression, chemoprevention in transgenic mice, and translational research. Knowledge of cell and molecular biology essential; experience with animal studies preferred. Send curriculum vitae, names and contact information for three references, and a statement of research interests to:

Sofia D. Merajver, M.D., Ph.D.
University of Michigan
Comprehensive Cancer Center
7217 Cancer Center
1500 East Medical Center Drive
Ann Arbor, MI 48109-0948
E-mail: smerajve@umich.edu
FAX: 734-936-7376

POSTDOCTORAL RESEARCH SCIENTIST is available immediately for Ph.D. or M.D. in laboratory affiliated with the University of Washington in Seattle to study leukemic function of the chimeric HRX fusion protein. Previous publications documenting experience characterizing and purifying cellular factors important in regulating phosphorylation and/or purifying components of chromatin remodeling complexes is required. Send curriculum vitae and two references, preferably by e-mail, to: **Dr. Douglas Tkachuk, Department of Pathology (113), Puget Sound Health Care System, 1660 South Colombian Way, Seattle, WA 98108.** E-mail: tkachuk@u.washington.edu.

POSITIONS OPEN

POSITION AVAILABLE IN OPTICAL IMAGING IN CELLULAR AND SYSTEMS NEUROPHYSIOLOGY

The Wilson group, at the University of California, San Diego, Department of Chemistry and Biochemistry, has a **POSTDOCTORAL** or **RESEARCH FACULTY**-level opening available for an accomplished Physiologist who wishes to help develop and use advanced optical techniques to observe and understand neuronal function at the cellular and systems levels, in a collaboration among ultrafast optical and neuroscience groups. Example projects include: high-speed functional imaging with variety of non-linear multi-photon techniques; interferometric imaging of transmembrane potential via refractive changes; second- and third-harmonic generation as a contrast mechanism for optical sectioning; photostimulation and manipulation by ultrafast pulses; and laser Doppler imaging of cortical blood flow.

For more information about this position, or to receive application process information, visit our website: <http://www-wilson.ucsd.edu>; e-mail: wjgibops@ucsd.edu. Positions commensurate with experience and qualifications, with salaries based on UC pay scales. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

An NIH-funded position is available to study the signal transduction mechanisms related to the effect of nitric oxide on migration and proliferation of vascular smooth muscle cells. Preference will be given to candidates who have a recent Ph.D. and experience in the techniques of modern biochemistry, including molecular biology. Send curriculum vitae and the names of three references to: **Dr. Aviv Hassid, Department of Physiology and Biophysics, University of Tennessee, 894 Union Avenue, Memphis, TN 38163.** E-mail: ahassid@physiol1.utmem.edu; FAX: 901-448-7126.

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

The National Eye Institute, National Institutes of Health, has a **POSTDOCTORAL POSITION** available for the study of glaucoma using molecular biology approaches. A background in molecular/cellular/developmental biology is desirable. Applicants must be U.S. citizens or permanent residents. Applicants must have less than five years of postdoctoral experience. Starting salary ranges from \$27,500 to \$38,000 per year depending upon experience. Please send curriculum vitae, bibliography, and names of three references to: **Dr. Stanislav Tomarev, Laboratory of Molecular and Developmental Biology, Building 6, Room 2A04, MSC-2730, Bethesda, MD 20892-2730.** Telephone: 301-496-2764; FAX: 301-402-0781; e-mail: tomarev@helix.nih.gov.

NIH is an Equal Opportunity Employer.

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

Molecular genetics **SENIOR POSTDOCTORAL FELLOWSHIP** available immediately for work on two projects: gene position candidate evaluations in mouse QTL studies and molecular genetics in families with a gene mutation resulting in an abnormal phenotype. Possibility of long-term position. Salary, benefits competitive. Send cover letter, curriculum vitae, and names of three references to: **Ms. C. Farrell, Loma Linda University, Mineral Metabolism Laboratory, P.O. Box 7210, Loma Linda, CA 92354.**

POSTDOCTORAL RESEARCH FELLOWSHIP. Positions are available for Postdoctoral Fellows experienced in molecular biology or protein chemistry. The research undertaken involves viral and immunological features of HIV pathogenesis. Must be U.S. citizen or permanent resident. Send curriculum vitae to: **Jay A. Levy, M.D., Division of Hematology/Oncology, Department of Medicine, University of California, San Francisco, CA 94143-1270.**

POSITIONS OPEN

TELOMERE LENGTH REGULATION

A **POSTDOCTORAL POSITION** is available to study how telomere proteins regulate telomere length and prevent chromosome ends from triggering senescence and cell-cycle points. You will explore the function of known vertebrate telomere proteins by making gene knockouts using a cell line that exhibits unusually high levels of homologous recombination. By analyzing the phenotype of the null cells and cells into which you have introduced mutant versions of the telomere protein, you will dissect the role of these proteins in telomere function. A future goal will be to identify new telomere proteins by using a retroviral expression system to complement the knockout phenotype(s). Experience in molecular biology is essential. Send curriculum vitae, description of research experience, and three reference letters to: **Dr. Carolyn Price, Department of Biochemistry, N146 Beadle Center, University of Nebraska, Lincoln, NE 68588 USA.** FAX: 402-472-9402; e-mail: cmp@biocomp.unl.edu. See website: <http://www.chem.unl.edu/price/price.html> for more information about the Price laboratory.

POSTDOCTORAL POSITION RETROVIRAL REPLICATION UNIVERSITY OF WASHINGTON

Study reverse transcription by retroviruses with a focus on the roles of RNase H and the mechanism of strand displacement synthesis. Emphasis will be on the elucidation of structure-function relationships as they apply to catalysis and enzyme specificity. Methodologies include standard cloning techniques, PCR, site-directed mutagenesis, protein expression and purification, macromolecular crosslinking, footprinting, enzyme kinetics, and gel analyses. Position available immediately, but applications will be accepted until the position is filled. Please send curriculum vitae, a brief statement of prior research experience, and the names of three references to: **Dr. James J. Champoux, Department of Microbiology, Box 357242, University of Washington, Seattle, WA 98195.** The University of Washington is an Affirmative Action/Equal Opportunity Employer.

Cancer NMR JUNIOR FACULTY and **POSTDOCTORAL POSITIONS** available immediately for NMR Spectroscopists/Biochemists/Physiologists/Molecular Biologists for projects on understanding the role of tumor vascularization and physiology in cancer cell invasion and metastasis. Projects involve studying human breast and prostate cancer as solid tumor models and isolated perfused cancer cells with potential for clinical applications. Knowledge of NMR spectroscopy/imaging desirable but not essential. Instruments include 11.7T, 9.4T, 4.7T experimental spectrometers and 2T clinical systems. To apply send a résumé and three letters of recommendation to: **Z. M. Bhujwala, Department of Radiology, The Johns Hopkins University School of Medicine, Traylor 208C, 720 Rutland Avenue, Baltimore, MD 21205.** E-mail: zaver@mri.jhu.edu. Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF COLORADO CANCER CENTER DENVER, COLORADO

A **POSTDOCTORAL FELLOWSHIP** is available immediately to investigate a novel membrane receptor implicated in cancer and related to patched. Expertise in protein isolation and biochemistry including mammalian and bacterial expression systems is essential. Other standard molecular biological techniques expected. Please send curriculum vitae and three references to: **The Administrator, University of Colorado Health Sciences Center, Division of Medical Oncology, 4200 East 9th Avenue, Denver, CO 80262.** FAX: 303-315-8825.

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POSTDOCTORAL POSITIONS IN ARTHRITIS GENE THERAPY

Postdoctoral positions immediately available within a highly interactive group to develop gene therapy strategies for the treating of rheumatoid arthritis and related joint disorders. Candidates with experience in molecular biology, virology, or immunology are encouraged to apply. Submit curriculum vitae, description of previous research, and list of references to: **Paul Robbins, Ph.D., Chris Evans, Ph.D., or Joseph Glorioso, Ph.D., Department of Molecular Genetics and Biochemistry, University of Pittsburgh, School of Medicine, Pittsburgh, PA 15261.**

POSITIONS OPEN

ANTIMICROBIAL PEPTIDES REGULATION OF EXPRESSION AND MECHANISMS OF ACTION University of California, Irvine

Three **POSTDOCTORAL POSITIONS** are immediately available in the University of California, Irvine Department of Pathology for studies on mammalian antimicrobial peptides (see: *FASEB J.* 10:1280-1289; 1996). Innovative Investigators are sought to expand ongoing studies on the peptide gene expression and mechanisms of antimicrobial action. Individuals with experience in the following areas are encouraged to apply: solid phase peptide synthesis; heterologous protein expression in bacterial, yeast, or mammalian cell systems; site-directed mutagenesis; cDNA and genomic cloning; interactions of peptides with model membranes. Send curriculum vitae, summary of research experience and interests, and names of three references to: **Dr. Michael E. Selsted, Department of Pathology, College of Medicine, University of California, Irvine, CA 92697-4800.** The University of California is an Equal Opportunity Employer committed to excellence through diversity.

RESEARCH ASSOCIATE POSITIONS MOLECULAR PHYSIOLOGY

Two positions are immediately available to study structure, function, and regulation of ion channels involved in Ca²⁺ signaling and necrotic/apoptotic cell death. One position requires prior experience with electrophysiological/patch-clamp techniques. The second position requires experience with protein isolation/purification, antibody production, and/or reconstitution techniques. Please send curriculum vitae, pertinent reprints, and the names and contact numbers of three references to: **Dr. William P. Schilling, Case Western Reserve University, MetroHealth Campus, Rammelkamp Center-Room R322, 2500 MetroHealth Drive, Cleveland, OH 44109-1998.** E-mail: wschilling@metrohealth.org. Equal Opportunity Employer.

POSTDOCTORAL POSITION CELL BIOLOGY/MOLECULAR BIOLOGY

Position available immediately at the Centers for Disease Control and Prevention, Atlanta, Georgia, for pursuit of independent research in the area of the pathogenesis, evolution, and genetic variation of HIV. The successful candidate must have advanced training in cell and molecular biology to aid in developing molecular techniques for studying the pathogenesis of HIV infections and to aid in the development of novel approaches to identify molecular events involved in the generation of viral diversity. Send curriculum vitae or contact: **Dr. Marcia Kalish, Centers for Disease Control and Prevention, 1600 Clifton Road N.E., Mailstop G-19, Atlanta, GA 30333.** E-mail: mlk3@cdc.gov; Telephone: 404-639-1024.

POSTDOCTORAL POSITION in molecular genetics of breast cancer and angiogenesis in breast cancer. Studies of gene expression, chemoprevention in transgenic mice, and translational research. Knowledge of cell and molecular biology essential; experience with animal studies preferred. Send curriculum vitae, names and contact information for three references, and a statement of research interests to:

Sofia D. Merajver, M.D., Ph.D.
University of Michigan
Comprehensive Cancer Center
7217 Cancer Center
1500 East Medical Center Drive
Ann Arbor, MI 48109-0948
E-mail: smerajve@umich.edu
FAX: 734-936-7376

POSTDOCTORAL RESEARCH SCIENTIST is available immediately for Ph.D. or M.D. in laboratory affiliated with the University of Washington in Seattle to study leukemic function of the chimeric HRX fusion protein. Previous publications documenting experience characterizing and purifying cellular factors important in regulating phosphorylation and/or purifying components of chromatin remodeling complexes is required. Send curriculum vitae and two references, preferably by e-mail, to: **Dr. Douglas Tkachuk, Department of Pathology (113), Puget Sound Health Care System, 1660 South Colombian Way, Seattle, WA 98108.** E-mail: tkachuk@u.washington.edu.

POSITIONS OPEN

POSITION AVAILABLE IN OPTICAL IMAGING IN CELLULAR AND SYSTEMS NEUROPHYSIOLOGY

The Wilson group, at the University of California, San Diego, Department of Chemistry and Biochemistry, has a **POSTDOCTORAL or RESEARCH FACULTY**-level opening available for an accomplished Physiologist who wishes to help develop and use advanced optical techniques to observe and understand neuronal function at the cellular and systems levels, in a collaboration among ultrafast optical and neuroscience groups. Example projects include: high-speed functional imaging with variety of non-linear multi-photon techniques; interferometric imaging of transmembrane potential via refractive changes; second- and third-harmonic generation as a contrast mechanism for optical sectioning; photostimulation and manipulation by ultrafast pulses; and laser Doppler imaging of cortical blood flow.

For more information about this position, or to receive application process information, visit our website: <http://www-wilson.ucsd.edu>; e-mail: wgjebops@ucsd.edu. Positions commensurate with experience and qualifications, with salaries based on UC pay scales. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

An NIH-funded position is available to study the signal transduction mechanisms related to the effect of nitric oxide on migration and proliferation of vascular smooth muscle cells. Preference will be given to candidates who have a recent Ph.D. and experience in the techniques of modern biochemistry, including molecular biology. Send curriculum vitae and the names of three references to: **Dr. Aviv Hassid, Department of Physiology and Biophysics, University of Tennessee, 894 Union Avenue, Memphis, TN 38163.** E-mail: ahassid@physiol.utm.edu; FAX: 901-448-7126.

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

The National Eye Institute, National Institutes of Health, has a **POSTDOCTORAL POSITION** available for the study of glaucoma using molecular biology approaches. A background in molecular/cellular/developmental biology is desirable. Applicants must be U.S. citizens or permanent residents. Applicants must have less than five years of postdoctoral experience. Starting salary ranges from \$27,500 to \$38,000 per year depending upon experience. Please send curriculum vitae, bibliography, and names of three references to: **Dr. Stanislav Tomarev, Laboratory of Molecular and Developmental Biology, Building 6, Room 2A04, MSC-2730, Bethesda, MD 20892-2730.** Telephone: 301-496-2764; FAX: 301-402-0781; e-mail: tomarev@helix.nih.gov.

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

Molecular genetics **SENIOR POSTDOCTORAL FELLOWSHIP** available immediately for work on two projects: gene position candidate evaluations in mouse QTL studies and molecular genetics in families with a gene mutation resulting in an abnormal phenotype. Possibility of long-term position. Salary, benefits competitive. Send cover letter, curriculum vitae, and names of three references to: **Ms. C. Farrell, Loma Linda University, Mineral Metabolism Laboratory, P.O. Box 7210, Loma Linda, CA 92354.**

POSTDOCTORAL RESEARCH FELLOWSHIP. Positions are available for Postdoctoral Fellows experienced in molecular biology or protein chemistry. The research undertaken involves viral and immunological features of HIV pathogenesis. Must be U.S. citizen or permanent resident. Send curriculum vitae to: **Jay A. Levy, M.D., Division of Hematology/Oncology, Department of Medicine, University of California, San Francisco, CA 94143-1270.**

POSITIONS OPEN

TELOMERE LENGTH REGULATION

A **POSTDOCTORAL POSITION** is available to study how telomere proteins regulate telomere length and prevent chromosome ends from triggering senescence and cell-cycle points. You will explore the function of known vertebrate telomere proteins by making gene knockouts using a cell line that exhibits unusually high levels of homologous recombination. By analyzing the phenotype of the null cells and cells into which you have introduced mutant versions of the telomere protein, you will dissect the role of these proteins in telomere function. A future goal will be to identify new telomere proteins by using a retroviral expression system to complement the knockout phenotype(s). Experience in molecular biology is essential. Send curriculum vitae, description of research experience, and three reference letters to: **Dr. Carolyn Price, Department of Biochemistry, N146 Beadle Center, University of Nebraska, Lincoln, NE 68588 USA.** FAX: 402-472-9402; e-mail: cmp@biocomp.unl.edu. See website: <http://www.chem.unl.edu/price/price.html> for more information about the Price laboratory.

POSTDOCTORAL POSITION RETROVIRAL REPLICATION UNIVERSITY OF WASHINGTON

Study reverse transcription by retroviruses with a focus on the roles of RNase H and the mechanism of strand displacement synthesis. Emphasis will be on the elucidation of structure-function relationships as they apply to catalysis and enzyme specificity. Methodologies include standard cloning techniques, PCR, site-directed mutagenesis, protein expression and purification, macromolecular crosslinking, footprinting, enzyme kinetics, and gel analyses. Position available immediately, but applications will be accepted until the position is filled. Please send curriculum vitae, a brief statement of prior research experience, and the names of three references to: **Dr. James J. Champoux, Department of Microbiology, Box 357242, University of Washington, Seattle, WA 98195.** The University of Washington is an Affirmative Action/Equal Opportunity Employer.

Cancer NMR **JUNIOR FACULTY** and **POSTDOCTORAL POSITIONS** available immediately for NMR Spectroscopists/Biochemists/Physiologists/Molecular Biologists for projects on understanding the role of tumor vascularization and physiology in cancer cell invasion and metastasis. Projects involve studying human breast and prostate cancer as solid tumor models and isolated perfused cancer cells with potential for clinical applications. Knowledge of NMR spectroscopy/imaging desirable but not essential. Instruments include 11.7T, 9.4T, 4.7T experimental spectrometers and 2T clinical systems. To apply send a résumé and three letters of recommendation to: **Z. M. Bhujwalla, Department of Radiology, The Johns Hopkins University School of Medicine, Traylor 208C, 720 Rutland Avenue, Baltimore, MD 21205.** E-mail: zaver@mri.jhu.edu. Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF COLORADO CANCER CENTER DENVER, COLORADO

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POSITIONS OPEN

POSTDOCTORAL POSITIONS IN IMMUNOLOGY UNIVERSITY OF PENNSYLVANIA

Immediate openings for Postdoctoral Fellows with a Ph.D. in immunology to work on one of the following projects: (1) Mechanisms of T cell-mediated immune responses and tolerance induction in regard to transplantation using TCR transgenic mice. (2) Nature of intestinal epithelial cell-lymphocyte interactions in the induction of oral tolerance and mechanisms of immune cell-mediated intestinal epithelial cell injury in IL2-deficient mice. (3) Study systemic and mucosal T cell responses in mice to a potential vaccine for HIV using *Listeria monocytogenes* as a vaccine vector. Please send curriculum vitae and three letters of reference to: Project (1) Laurence A. Turka, 901 Stellar Chance Laboratories, 422 Curie Boulevard, University of Pennsylvania, Philadelphia, PA 19104. FAX: 215-573-2880. Project (2) Simon R. Carding, Department of Microbiology, 303A Johnson Pavilion, University of Pennsylvania, Philadelphia, PA 19104. FAX: 215-573-9068. Project (3) Fred R. Frankel, Department of Microbiology, 319C Johnson Pavilion, University of Pennsylvania, Philadelphia, PA 19104. FAX: 215-573-9068; e-mail: frankelf@mail.med.upenn.edu.

STRUCTURAL BIOLOGY AND SIGNAL TRANSDUCTION

A POSTDOCTORAL POSITION in chemistry or biochemistry is available immediately to study the structure and mechanisms of membrane-targeting proteins in vision and signal transduction. Experience in nuclear magnetic resonance spectroscopy, protein purification, or molecular biology techniques is preferred. New research facilities with high-field NMR spectrometers are available. See website: <http://www.carb.nist.gov>. Closing date for application is June 1, 1998. Send curriculum vitae, letter of interest, and three references to: Dr. James B. Ames, Center for Advanced Research in Biotechnology, 9600 Gudelsky Drive, Rockville, MD 20850. E-mail: james@carb.nist.gov; website: <http://indigo15.carb.nist.gov/carb/ames.html>; Telephone: 301-738-6120; FAX: 301-738-6255.

The University of Maryland Biotechnology Institute is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and candidates with disability are encouraged to apply.

POSTDOCTORAL POSITION UNIVERSITY OF CALIFORNIA-RIVERSIDE

Two Postdoctoral positions will be available August 1, 1998, to investigate (1) how a novel RNA-binding protein regulates translation in yeast and plants and (2) programmed cell death (PCD) during plant development. Studies will include protein-protein and RNA analysis, genetics of signal transduction, or the analysis of hormones, nucleases, and proteases during PCD. Experience in molecular biology and/or biochemistry is required. Send curriculum vitae (by e-mail) and three letters of recommendation to: Dr. Daniel R. Gallie, Department of Biochemistry, University of California, Riverside, CA 92521. FAX: 909-787-3590; e-mail: drgallie@citrus.ucr.edu.

EUROPEAN OPPORTUNITIES

POSTDOCTORAL POSITION available to study molecular mechanisms associated with the development of brain tumors, including genetic analysis of human neoplasms and the use of transgenic mice. Extensive experience in molecular biology/pathology desirable. Annual stipend currently FF138,240 tax-free. Send curriculum vitae with list of publications and names of two referees to: Dr. H. Ohgaki, Unit of Molecular Pathology, International Agency for Research on Cancer, 150 cours Albert Thomas, 69372 Lyon Cedex 08 France. FAX: +33-472-73-85-64; e-mail: ohgaki@iarc.fr; website: <http://www.iarc.fr>.

POSTDOCTORAL RESEARCH FELLOW

Post available for a project in immunology/biotechnology of rheumatoid inflammation (Ph.D., M.D., or equivalent) working with antigens, B and T-cells, and their receptors in rheumatoid inflammation.

Information and applications to: University of Oslo, Prof. Jacob B. Natvig or Dr. Keith Thompson, Telephone: +47-22-03-31-90/80; FAX: +47-22-20-06-36 or +47-22-20-72-87; e-mail: thompson@labmed.uio.no.

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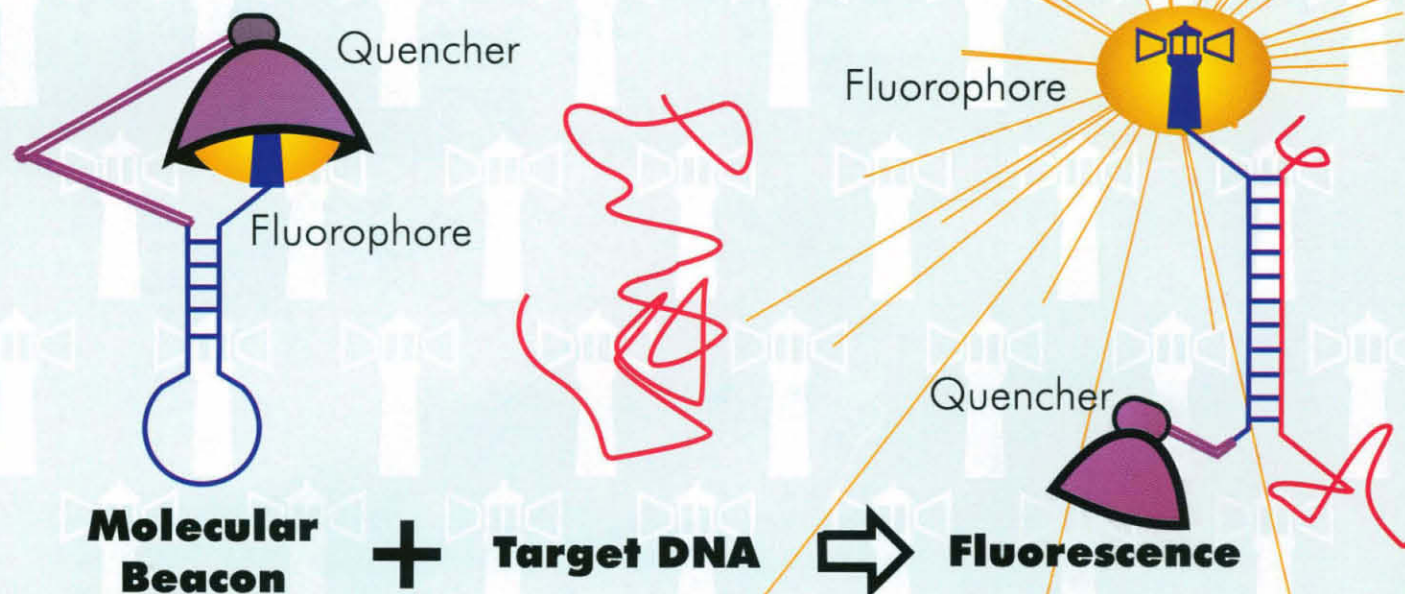
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1. S. Tyagi and F. R. Kramer. *Nature Biotechnology*. **14**, 303 (1996).
2. S. Tyagi, D. P. Bratu, F. R. Kramer. *Nature Biotechnology*. **16**, 49 (1998).
3. L.G. Kostrikis, et al. *Science*. **279**, 1228 (1998).

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