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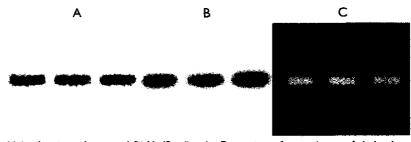
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CONTINUED FROM PAGE 2371 INSTRUMENTATION, APPARATUS, AND LABORATORY MATERIALS

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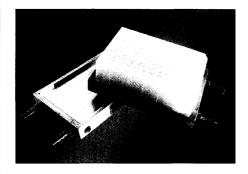
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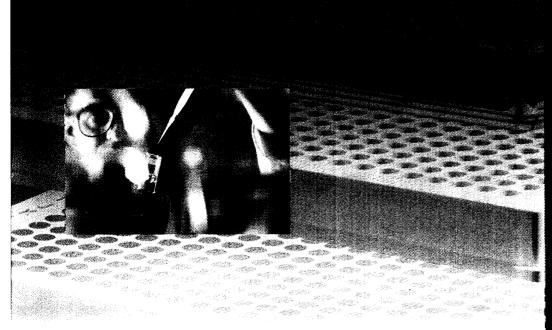
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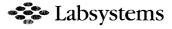
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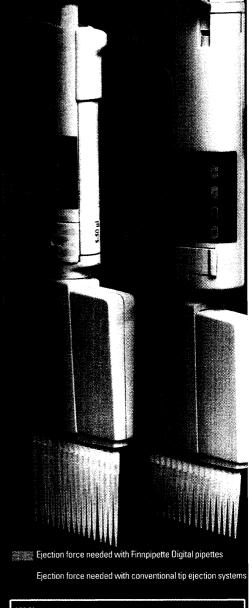
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Fluid Mechanics and Cellular Pathways

From Test Tubes

Inside Live Cells

to Read Plates

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Laboratory Technology Trends: Advances in Lab Instrumentation



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As the pace of life science R&D accelerates, laboratories face heavy demands to produce timely, accurate results at reduced costs. The solution: automation of lab instruments. by Peter Gwynne and Gary Heebner

About 30 years ago, handheld calculators began to find their way into the hands of college students and laboratory researchers. The more technically minded individuals promptly discarded their slide rules and turned to the new inventions that promised to process more and more complex data sets.

The era of the handheld calculator lasted about a decade. Then the desktop personal computer arrived and quickly overshadowed calculators. Since then the computer industry has created a succession of smaller, faster, and smarter versions of the PC, with each new generation changing the lives of its users a little more. And just as the handheld calculator quickly found a place in the lab, personal computing in its various forms has become a staple of bench research. Indeed, it has exerted a profound impact on the productivity of individual scientists and research teams.

It has certainly come to the aid of today's laboratory manager, who faces constant pressure to produce and deal with rapidly growing amounts of data. "We're seeing a dramatic increase in the compound file," says David Giegel, director of High Throughput Screening (HTS) Technology at Pfizer's Ann Arbor Laboratories. "Whereas in the 1980s we were talking about maybe tens of thousands of compounds in a library, now we're talking about millions."

The increase in compounds to be screened and the resulting pressure on lab managers stem largely from three factors. The increased pace of R&D for new products, the need for better quality control in industrial

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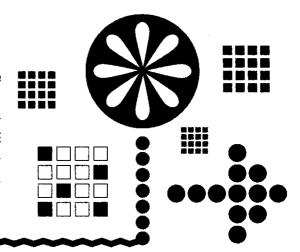
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settings, and increasing cost control and government regulations in the clinical setting have combined to create numerical targets for screening undreamed of in past decades.

Those factors, in turn, stem from a fundamental need of the modern pharmaceutical industry. "We have found that the pharmaceutical companies have a problem maintaining their P&E ratios," explains Ed Alderman, director of pharmaceutical research sciences at Zymark Corporation. "They have to turn over five to 10 big chemical entities per year, not the 0.5 they do now. Senior management wants to quadruple throughput while reducing costs by 30 percent."



Strategies for Survival

To survive in the increasingly competitive environment, laboratories must produce results in a timely fashion with fewer errors and at lower costs. They must also find ways to utilize highly skilled laboratory personnel better by eliminating the redundant, low value tasks that they perform. "We're very much driven by the need for throughput," says Stephen Oldfield, director of marketing for Molecular Devices Corporation. "People are wanting to reduce costs. High throughput and low cost are what we need."

Automation offers a solution to many of these requirements. Its benefits include increased productivity via the ability to process larger numbers of samples per unit of time, a reduction in human errors caused by repetition and sheer boredom, and lower labor costs, which are a major component in testing procedures. "The field is technology-driven," says David Litman, senior vice president of R&D for BD Biosciences. "There's no other way to get the information out at a high enough throughput with enough parameters." The results of automated systems, Litman adds, give bench scientists the chance to ask a lot more questions.

Automation definitely has the potential to pay for itself quickly. "Three years ago 10,000 wells screened per day were fine," says Seth Cohen, director of Millennium Pharmaceuticals' HTS Department. "Now it's tens of millions of wells per year. So if you can get the cost down to a penny a well from a dollar per well you're saving enough to pay for a new, more sensitive detector the first time you use it."

To cut the costs and improve the productivity of bench science, vendors of laboratory equipment are streamlining their instruments in several ways. Scientists have just about got used to 384-well plates that have cut the cost of reagents and the time taken for assays by about a half when compared with the more familiar 96-well plates. Now, they face the prospect of using 1,536-well plates. "We could do 50,000 to 70,000 data points per day with 96-well

plates," says Giegel. "With 1,536 wells we could do upward of half a million data points per day, with a concomitant decrease in costs."

Fluid Mechanics and Cellular Pathways

To make the large well numbers more attractive, efforts are also under way to reduce the amount of reagent necessary to produce each data point. "The research community has always wanted to work with many of their solutions in the submicroliter range," explains Sven Bülow, director of product management at German company Eppendorf AG. That will require dramatic advances in the physics of liquids. "We're dealing with different fluid mechanics," says Giegel. "Shaking won't mix liquids at the 2- to 10-microliter scale, but you have too large a volume for diffusion to work. So you have the worst of both worlds."

Another area that demands new approaches is understanding the multitude of molecular interactions inside cells. "Clearly live cell analysis is one of the major areas of focus in bioscience," says Litman. "We think that one of the next frontiers, important for all biomedicine, will involve how all the signaling pathways operate at the cellular level. We're developing a powerful toolset, including imaging, laser scanning, and flow cytometry to get at those answers." Those technologies and others promise to unscramble some of the mysteries of cellular interiors, "It used to be like the Heisenberg principle: You could precisely identify an individual cell, or describe the average biology of a population of cells, but you couldn't accurately tell what was going on in a specific cell," Litman continues. "Now the technology is leading to the point at which you can hope to know what's happening in each cell at a molecular and functional level."

The exponentially increasing numbers of data points put extra pressure on bench scientists. To permit them to use their time in the lab for interpreting rather than preparing their assays, instru-

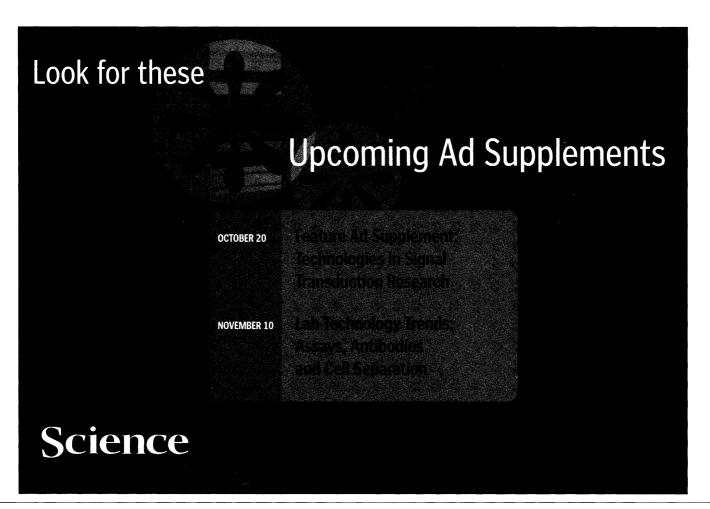
ment makers are taking the next obvious step beyond automation. "We make our assays compatible with robotics systems," says Oldfield. "We have to think about how we work with robotics."

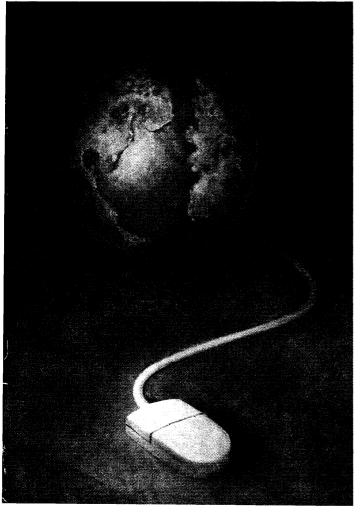
From Test Tubes to Plates

Most laboratory procedures can be broken down into three steps: sample preparation, sample analysis, and data management. Once computers arrived, the accuracy of testing and the ability to analyze complex sets of data soared. With data management dramatically improved, the work of preparing samples and running them through experimental protocols became the bottleneck in advancing productivity. In the 1980s the advent of automated systems brought together different hardware devices to accomplish specific laboratory tasks. Decreasing the time required for sample preparation was the next major step in improving lab productivity and quality.

The majority of the early progress in laboratory automation took place in the area of liquid handling. As sample volumes necessary for a reaction decreased from several milliliters to microliters. experiments evolved from being conducted in test tubes to being performed in microtiter plates. The plates possessed several unique attributes that have made them the gold standard in handling many small volume samples. The precise and predictable positioning of its wells permitted the use of multi-channel pipetters to dispense liquids into the plates. But while they offered a major improvement in productivity the plates didn't solve all the problems. Lab technicians continued to make mistakes and to forget which wells of a plate had received a chemical reagent. The procedure of pipetting into many rows of these 96-well microtiter plates was a tedious and boring job.

Thus the next step in liquid handling involved the development and introduction of automated stations to handle liquids. Originally considered luxury items, these instruments soon became common laboratory tools for researchers working with large numbers of





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samples. The stations allowed laboratory personnel to prepare microtiter plates with a limited amount of operator intervention and greatly improved accuracy. However, the instruments still needed to be hand fed with empty plates, and the filled plates needed to be removed, also by hand in most cases.

Today, several companies, including Packard, Robbins Scientific, and Zymark, offer automated liquid handling systems with software to program the steps involved in adding reagents to each plate. Technicians enter filling instructions into the instruments, often using user-friendly Windows-based software programs. These programs also allow the process to be monitored and documented for auditing purposes.

Eppendorf is taking the process a stage further. "We're working on an enzyme dispenser that will have the same handling characteristics that people are familiar with in their everyday microliter pipettes," says Bülow. "It will accommodate small cartridges that can contain restriction enzymes or a very expensive, invaluable, or just isolated protein. It can then dispense the liquid in volumes between 10 nanoliters and one microliter with high precision."

Speeding Up Screening

During the past 10 years, combinatorial chemistry and high throughput screening have profoundly influenced researchers' ability to produce and evaluate a group of chemical compounds for any number of purposes. This technology helped to decrease the time and amount of material needed to produce and screen many chemical compounds. Combinatorial chemists can produce a large number of compounds with varying but related structures, which can then be screened for biological activity.

The pharmaceutical industry benefits most obviously from combinatorial chemistry. In the past, a medicinal chemist working for a pharmaceutical company might have been able to produce several new synthetic compounds each week. Today this same chemist using combinatorial chemistry techniques produces hundreds of related chemical compounds in a single day. Pharmaceutical companies are now building vast libraries of chemical compounds numbering in the hundreds of thousands and larger. High throughput screening operations are analyzing up to hundreds of thousands of samples in a single day. This creates a need to process more compounds than ever before.

The microtiter plates that handle these compounds have already changed from 96-well to 384-well versions. Recently ultrahigh throughput screening (UHTS) instruments have started to reach



the laboratory. Based on a 1,536-well microtiter plate format, these instruments possess robust liquid handling, specimen reading and data analysis capabilities. "We have a push for 1,536 wells because we've got a lot more targets coming our way," says Giegel. "We haven't even started to mine the data from the Human Genome Project yet."

The UHTS instruments permit researchers to process over 100,000 samples per day. They use sample volumes of as little as 5 to 10 microliters rather than the 100 microliters required for conventional HTS. That means smaller amounts of reagents, a factor that can encourage scientists to screen more expensive or more precious substances.

Designing equipment that can handle such tiny volumes of liquid poses difficult problems for manufacturers. The next step offers even tougher challenges. "The research community has always wanted to work with solutions in the submicroliter range," says Bülow. "But it's not possible to get accurate delivery with conventional air-displacement pipettes. If you try to deliver 0.1 microliters you might end up delivering twice as much liquid. That has very strongly inhibited the adoption of smaller dimensions in PCR assays and other areas. Scientists have to use wastefully high volumes to assure that they get in the plus or minus 10 percent range of the amounts they need."

expertise beyond that of traditional life scientists. "We have chemical engineers and consultants from engineering departments who are experts in fluid dynamics," says Giegel. Eppendorf, meanwhile, has developed a prototype that shows promise in the lab. "We have done lots of experiments with restriction enzymes, polymerases, and very fragile enzymes," Bülow reports. "We've shown it's possible to use tiny volumes of these enzymes without losing activity and to handle liquids spanning a wide range of viscosities without any need for recalibration."

Handling submicroliter volumes of fluids demands

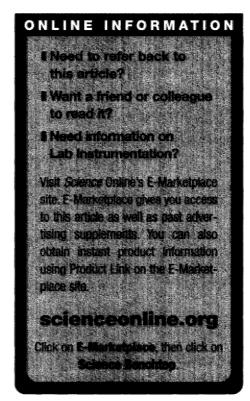
Inside Live Cells

In addition to assaying minuscule volumes of compounds, researchers want to examine events inside cells as they occur. The technology for doing so has improved since the early 1970s, when Becton Dickinson introduced the first commercial flow cytometer, the FACS-1. A few years later Ortho Diagnostics followed suit with its version of this powerful cell analysis instrument. The flow cytometer enabled researchers to characterize populations of cells based on inherent cellular properties or fluorescent labels used to tag certain markers in or on the surface of specific cells.

Coulter Electronics then introduced a flow cytometer with multiparameter sorting capability. These instruments quickly became much smarter, allowing researchers to measure more parameters in a single experimental run. By the mid-1990s flow cytometers had advanced from sorting several thousand cells each second to over 50,000 cells per second.

Researchers use several other cell-based assay formats to optimize leads and to predict possible toxic effects on target cells. These formats include viral titer assays and fluorescent signal assays. Cellomics, Universal Imaging, and others have developed instruments and software for high content screening. This allows automated measurement of such complex cellular activity as morphological changes, apoptosis, adhesion, and protein trafficking in the living cell. These measurements add another layer of screening to identify relevant information about the effects of compounds on cells. Coupled with software of image acquisition, analysis, data review, and data reporting, these instruments bring screening to another level.

These automated systems allow scientists to analyze molecular interactions within living cells.





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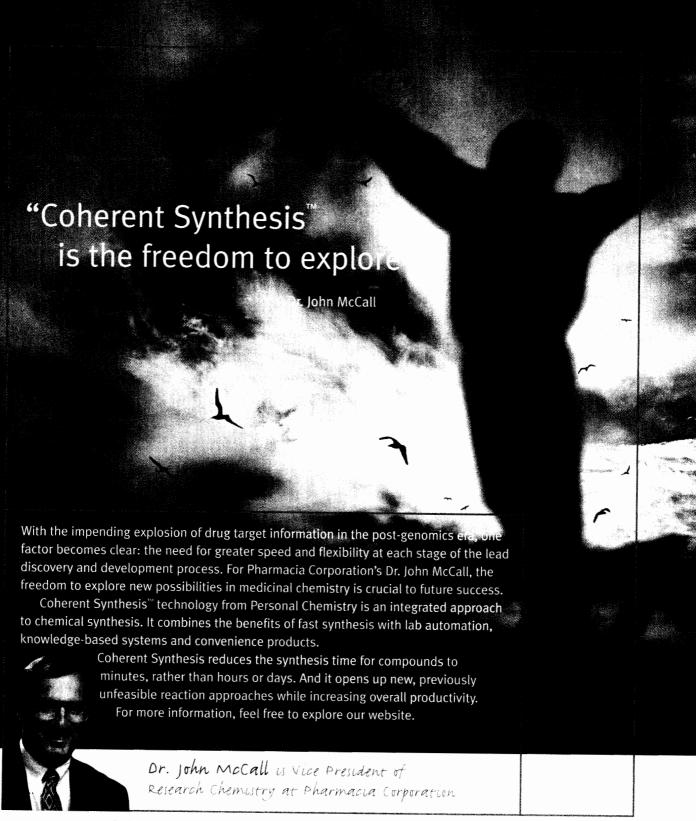


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Such "whole cell" systems have several advantages over *in vitro* compound-target measurements. Scientists can evaluate molecular interactions in the context of the actual intracellular environment. They can evaluate drug penetration in whole cell studies. And whole cell assays eliminate the need for protein purification and expression steps.

NewTechnologies to Read Plates

The success of live cell analysis techniques depends in large part on the ability to read accurately multiwell plates, and particularly the 1,536-well versions. "We're using imaging technologies a lot more. We're moving to cameras, charge-coupled device (CCD) chips, and laser-based microscopy," says Cohen. Millennium uses North Star, a CCD system from Applied Biosystems that looks for luminescent reactions on the plate, and FMAT, a laser scanning method developed by Applied Biosystems and BD Biosciences. "Because it's laser scanning there's no wash involved," points out Litman. "You can do assays on particles and cells, and it's the only method of doing high-throughput apoptosis assays."

Molecular Devices has improved FLIPR, the kinetic imaging plate reader introduced in 1997 that allowed live cell assays to be used in primary screening. "We have introduced chemistry to enable a very rapid no-wash procedure," says Oldfield. "Our FLIPR calcium assay kit reduces labor costs as there's much less hands-on time."

The company now plans to expand the FLIPR technology. "We have liveware products with chimeric G-proteins so that you can screen for receptors that would normally be signaling through cyclic AMP," Oldfield says. "And our next kit, coming out this month, is designed to assay ion channels with a throughput as high as that of calcium screening."

Another series of instruments from Molecular Devices, CLIPR, relies on chemiluminescence rather than fluorescence. "We use a very sensitive CCD camera that gives very flat field imaging," says Oldfield. "The lensing system from Affymax permits you to see everything on the plate without distortion."

Physics principles continue to play a prominent role in the instruments to examine live cells. "In our cytometry division there's a lot of applied research in areas of solid-state lasers and fluidics," says Litman. "In engineering we have a lot of focus on high-speed digital processing. We're developing technology inhouse and in collaborations to identify specific cytotoxic lymphocytes."

From Automation to Robotics

Automation systems are usually a combination of hardware devices interfaced together to perform specific laboratory procedures, such as filling microtiter plates with a substrate or other reagent. These can be very simple, dedicated workstations that perform a task or a group of tasks such as sample dilution, filtration, or the addition of reagent. The functions are fixed and often specific to a particular task or experiment.

In contrast, laboratory robotics systems can usually perform many functions and can be designed and programmed to meet specific laboratory needs. They enable computers to do physical work in addition to processing data. These systems are very flexible in that they can be redesigned and reprogrammed to meet the changing needs of a laboratory environment.

Zymark, an industry leader in laboratory robotics, uses a modular system of robotics, computers, and hardware that allows for the expansion of capabilities without obsolescence. Its systems can be configured to use existing balances, titrators, or other instruments found in a laboratory. "Our new Sci-Clone™ liquid handler has an x-y-z gantry head and a 15-position deck," says Alderman. "It can have either fixed tip or disposable cannulas. Attached to the head are up to four dispensers of bulk reagents. We can also put a stacker unit behind the head. This provides multitasking capabilities and increases storage capacities so that people can put these things on and walk away."

Eppendorf has recently devised a robotics system that combines its own DNA purification chemistry with a Zymark platform. "It has a throughput of 50 plates in 12 hours and 100 in a 24-hour run," says Bülow. "As far as we know it's the only system with full walkaway capacity."

The growing ability of robotics systems to generate data puts pressure on data management. "Someone has to translate the data into usable information and knowledge," says Alderman. "We're working with various third-party companies to develop expert systems. We're clearly hardware-based, but we're becoming more and more a software company."

Automation and robotics in laboratory instruments will continue to evolve in response to the needs of customers. The tools will become even faster, smaller, and smarter, enabling researchers to gain new insights into the process of drug development and ultimately the treatment of disease. Pharmas and biotechnology companies can't afford to stop their efforts to improve. "It's a fantastic field as

it's driven by biology, chemistry, robotics, and informatics," says Millennium Pharmaceuticals' Cohen. "You can improve by going in any of those four directions, but if you stand still, two years from now you'll be far behind."

Peter Gwynne is a freelance writer based on Cape Cod, Massachusetts, U.S.A. Gary Heebner is president of Cell Associates, a scientific marketing firm in Chesterfield, Missouri, U.S.A.

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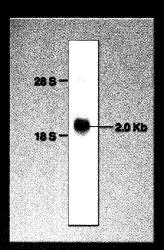
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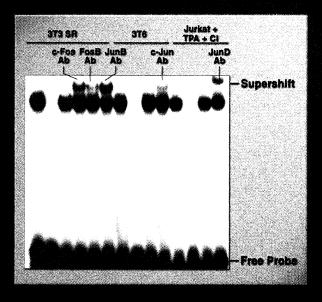
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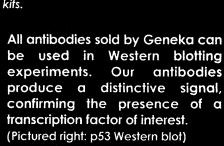
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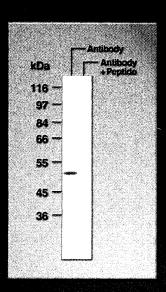


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The Department of Biochemistry, Duke University Medical Center, invites applications for a faculty position at the level of Assistant, Associate, or Full Professor. However, we are especially interested in applicants at the Assistant Professor level. We are seeking outstanding candidates with experience in the field of bio logical NMR as applied to fundamental problems of enzymology, protein structure, or nucleic acid biochemistry. Duke University has just installed an 800 MHz spectrometer, which complements the existing 600 and 500 MHz instruments in the NMR Center. The candidate may also choose to be affiliated with the newly created Center for Chemical Biology in the Duke University School of Medicine. Send résumé, summary of research interest, and three letters of reference to: Christian R. H. Raetz, Chairman, Department of Biochemistry, Duke University Medical Center, Durham, NC 27710. Applications should be received by November 1, 2000. Duke University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT PROFESSOR

The Division of Geographic Medicine is seeking a new faculty member to address issues in molecular parasitology. Current faculty interests include malaria, toxoplasmosis, filaria, onchocerciasis, HIV, pneumocystis, and other opportunistic infections. The ideal faculty member would bring a complementary interest to the department, and there is a special interest in expanding into trypanosomiasis. This full-time, nontenure-track faculty position is suitable for someone who has had postdoctoral training and several key publications, as well as research ideas mature enough to garner independent funding. The incumbent will be expected to raise his or her own salary through extramural funds within 12 to 18 months of hiring. Expected start date is October 1, 2000. Interested persons should contact:

Sten H. Vermund
Professor and Director
Division of Geographic Medicine
BBRB 206
Birmingham, AL 35294-2170
Telephone: 205-975-7700
FAX: 205-934-5600
E-mail: sten@uab.edu

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TENURE-TRACK BIOLOGIST: GENETICS

The Department of Natural Sciences at the University of North Florida invites applications for a tenuretrack biology position in genetics beginning August 2001. Candidates must have a Ph.D. in biology, a strong commitment to undergraduate teaching, and the ability to conduct meaningful research involving undergraduates. Postdoctoral experience and the ability to procure external funding are valued assets. Candidates should be able to teach general genetics and either immunology, developmental biology, and/or molecular cell biology, as well as introductory biology. Research area and interests within genetics are open. A letter of application, curriculum vitae, concise statements of teaching experience and research interests, undergraduate and graduate transcripts, and three letters of reference should be sent to: Biology Search Committee, Department of Natural Sciences, University of North Florida, Jacksonville, FL 32224-2661 by postmark deadline November 10, 2000.

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TWO FACULTY POSITIONS MOLECULAR NEUROBIOLOGY

The Division of Biological Sciences at the University of Missouri-Columbia invites applications for two tenure-track faculty positions at the ASSISTANT or ASSOCIATE PROFESSOR level. Preference will be given to candidates using molecular approaches and having research interests which complement those of current faculty in the Division of Biological Sciences, including neural plasticity, developmental neurobiology, ion channel function, and sensory transduction. Missouri University has strong interdisciplinary programs in molecular biology and genetics, and the regulation of growth and development is a major research area in the Division. A highly competitive salary, excellent start-up package, modern research laboratories, and an active graduate program provide an extremely supportive environment. Assistant Professor candidates should have postdoctoral experience and demonstrated potential for independent research. Associate Professor candidates must have an established, nationally recognized research program. All candidates will be expected to participate in graduate and undergraduate teaching. For more information about the Division of Biological Sciences, consult website: http://www.biology.missouri.edu/. For information about our Molecular Biology Program, consult website: http://www.biotech.missouri. edu/mbp/. Send curriculum vitae, reprints of publications, statement of research and teaching interests, and letters from three references to:

Dr. John David 105 Tucker Hall University of Missouri-Columbia Columbia, MO 65211-7400

Applications should be received by November 17, 2000, to receive full consideration. We are firmly committed to fostering ethnic and racial diversity on our faculty and strongly encourage applications from minorities and women.

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Moffitt offers an excellent salary/benefits program and professional academic environment. Applications will be reviewed immediately until the position is filled. For full consideration, all responses must include Job Code CE101. To apply, send or FAX résumé or curriculum vitae, including names of references, by October 13, 2000, to: Human Resources, Moffitt Cancer Center, Job Code CE101, 12902 Magnolia Drive, Tampa, FL 33612. FAX: 813-979-6700. For more information, contact: Dr. Noreen Luetteke, Scientific Director of Mouse Models Core Facility. E-mail: luetten@moffitt.usf.edu. Aftimative Action Employer. Drug-free workplace.



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At Biogen, we believe that computational blology and chemistry are quintessential ingredients for successful drug discovery in the post-genome era. Our Research Informatics Department is responsible for the development, implementation, and support of sophisticated solutions for data analysis, information management, and knowledge discovery across the whole spectrum of research activities. To achieve our ambitious goals, Research informatics scientists work hand in hand with colleagues in all of Biogen's research focus areas to spark new ideas and future innovations. We are aggressively looking for highly motivated candidates to join our rapidly expanding team. Openings are available in Bioinformatics and Workgroup Support.

SECTION HEAD, WORKGROUP SUPPORT

Lead a "rapid response" team to provide computational solutions to all areas of Biogen's research, including genomics, chemistry, high-throughput screening, mass spectrometry and pharmacology. Collaborate with research scientists to identify hardware, software and database solutions that enhance the discovery process. PhD in Biology, Chemistry, Physics, Computer Science or a related field. 4+ years of relevant experience in a drug discovery environment.

SENIOR STATISTICIAN, RESEARCH INFORMATICS

Develop and implement advanced data analysis approaches in Research Informatics, with an emphasis on statistical approaches for analyzing and interpreting large and very large data sets in expression profiling and high-throughput screening. PhD in Statistics, Mathematics, Biology, Bioinformatics, Physics, Computer Science or a related field. 3+ years of relevant experience.

SENIOR BIOINFORMATICS SCIENTIST, DATABASE DESIGN AND APPLICATION DEVELOPMENT

Design and implement new databases and database applications in support of Biogen's research programs. In close collaboration with Genomics and other scientists define data management architecture, design relational databases and implement them, coordinate database integration activities, participate in database application development and provide consulting to other bioinformatics scientists to optimize database applications. PhD or MS in Computer Science, Biology, Chemistry, Bioinformatics or a related field with 2+ years of relevant experience. Oracle/SQL background, Perl and HTML skills.

SENIOR BIOINFORMATICS SCIENTIST, FUNCTIONAL GENOMICS

Create and implement new bioinformatics tools in support of Biogen's Genomics program. In close collaboration with Genomics and other scientists, identify opportunity and needs for innovative solutions for the analysis and management of biological data and information discovery in databases. PhD in Biology, Bioinformatics, Computer Science or a related field with 3+ years of relevant experience. Experience in data mining/KDD, expert systems, or NLP highly desirable.

BIOINFORMATICS SCIENTIST, GENE FUNCTION ANALYSIS

Create and implement new bioinformatics tools in support of Biogen's Genomics program. In close collaboration with Genomics and other scientists, identify needs for new software solutions for gene mining, primer selection, gene clustering and functional annotation. PhD or MS in Biology, Bioinformatics, Computer Science or a related field with 2+ years of relevant experience. Experience with Perl, HTML, and Oracle, Java skills desirable.

BIOINFORMATICS SCIENTIST, GENE EXPRESSION ANALYSIS

Create and implement new bioinformatics tools in support of Biogen's Genomics program. In close collaboration with Genomics and other scientists, identify needs for new software solutions for gene expression analysis and functional annotation. PhD or MS in Biology, Bioinformatics, Computer Science or a related field with 2+ years of relevant experience. Experience with Perl, HTML, and Oracle, and Java skills desirable.

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Lead a group in developing and validating empirical predictive ADMET technologies for prioritizing chemical and biological leads. You'll collaborate with senior staff to define tool attributes and then work with scientists to deliver high throughput technologies that meet these attributes. You'll need a PhD in Toxicology or DMPK, 5-10 years experience in a pharmaceutical or biotechnology company and background in preclinical development in absorption, metabolism, or toxicology.

Director, Lead Discovery

Take charge of a group developing new computational analysis tools for lead discovery and optimization in areas such as high throughput screening results, chemical library design and computational predictive ADMET. Qualifications include experience in computational biology/chemistry/pharmacology and strong familiarity with methods for predicting drug activity and ADMET properties.

Scientist, Pathways

Develop informatics tools and post-genomic methods in target discovery, target validation and diagnostics, and develop databases and modeling to simulate pathway information from transcriptional profiling data. You'll need a PhD in Molecular Biology, Biochemistry, Computational Biology, Biomathematics or a related field, 2-3 years of postdoc or industry experience, and excellent communication skills.

Scientist, Computational Biology

Work on data analysis and project management for our diagnostic and pharmacogenomic programs. We require background in Biology and Computer Science and skills in programming, sequence analysis, statistics, and data analysis. Project management, productivity, and communication skills are essential.

Project Manager, Software Development

Manage development teams in a dynamic distributed computing environment and deliver world-class software products to support drug discovery efforts. You'll need a BS/BA in Computer Science or Engineering, 1+ years software project management experience, 5+ years in software development/systems integration, and background in 1 or more of the following: C++, Smalltalk, lava, and client server/relational database (Sybase/Oracle).

Process Optimization Engineer

Work on projects aimed at doubling the productivity of drug development activities by analyzing and measuring process performance. You must have a BS/MS in Industrial Engineering or Operations Research with 2-5 years experience in the pharmaceutical or biotech industry.

Director, Software Quality and Documentation

Manage a group performing QA and documentation tasks on Millennium software and define and promote effective QA and technical documentation practices/software development approaches. We require a BS/BA in Computer Science (preferred), Science or Engineering, 5+ years management experience, 10+ years of software quality assurance experience, and background in 1 or more of the following: Win95/98/2000/NT, Solaris, MacOS, JAVA, C/C++, Smalltalk, LISP and SQA.

Software Engineer

Plan, develop and implement software applications to support discovery and validation of diagnomic and pharmacogenomic markers. Qualifications include a BS in Computer Science, Software Engineering, or a related field (MS preferred) and 5+ years experience building software systems, including 2+ years developing systems. You'll also need knowledge of Perl, CGI programming, web graphics programming, and the Perl DBI relational database application.

Software Engineer

Design, code and deploy chemical and biological web-based information tools for Lead Discovery and Chemistry, working with users to determine requirements. We require design and development experience with Java, Web, Servlet, Unix, and NT and 2+ years of OO development.

Technology Specialist

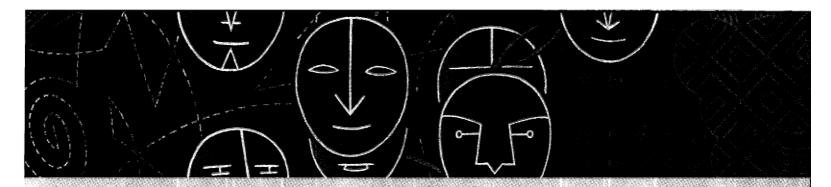
Help a team that transfers process and bioinformatic technologies to our external partners by providing on-site technology installation, troubleshooting, training, and user support. You'll need a BS/MS in Biology with a solid foundation in molecular biology and 4+ years experience in a lab, with background in DNA sequencing, genotyping, or proteomics technologies.

Software Engineers, Process Technology

Work on database and scientific applications to support transcription profiling (gene chip) research. A background in Microsoft COM technologies (Visual Basic, C++, ATL) is important. Applicants with experience in statistics, scientific computing, and database technologies encouraged to apply.

Software Support Specialists

To ensure transfer of process and bioinformatics technology to our partners, you'll perform on-site software installation, training, troubleshooting, and other system administration duties. Travel required. We require 3+ years IT experience within a multi-platform environment and background in Perl, Korn/Bourne shell scripting for task automation. Unix, Windows 95, MacOS, Ethernet, TCP/IP, and Sybase databases.



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Sr. Scientist/Manager, Mouse Models Group

Manage a staff of 13-14, including the transgenic/knockout, gene targeting vector, and ES cell groups, You'll also direct mouse model technology projects. Qualifications include a PhD and postdoctoral experience, including background in the design, generation and analysis of knockout and transgenic mouse models, focusing on generating gene targeting constructs.

Sr. Scientist, Hematology

You'll oversee and develop scientific efforts in the hematology program and direct activities for the identification and nomination of therapeutic targets. We require a PhD, a postdoctoral fellowship, 5+ years industry experience, strong knowledge of hematology, and molecular biology/cell biology skills.

Sr. Research Associates, Medicinal Chemistry

Execute multi-step synthesis, including purification, analysis and identification of compounds/scaffolds, and execution of parallel synthesis (solution/solid phase) in hit-to-lead or lead optimization phases. This requires a BS with 5+ years experience in an industrial lab, or an MS with 3+ years. Expertise conducting multi-step synthesis of drug compounds/scaffolds, including acquisition and interpretation of spectral data (NMR, HPLC, TLC, etc.) and in-depth knowledge of purification techniques are essential.

Research Associates, ADMET

With the goal of identifying and delivering qualified drug candidates, you'll characterize the affinity, absorption properties, metabolic stability, toxicity, selectivity, and species specificity of chemical compounds from lead series at the human fatty acid transporter protein subtype 4 (FATP4). We require a BS/MS in Biochemistry or related biological science.

Scientist, Protein Mass Spectrometry

You'll lead the identification of protein markers in Alzheimer's Disease, taking responsibility for discovering, characterizing and validating protein markers present in complex biological fluids. We require a PhD; postdoctoral experience helpful.

Scientist, Statistical Genetics

You'll develop haplotype-based gene-localization techniques, improve strategies to incorporate SNP data in genetic analysis, and design simulation tools to benchmark new methods and to aid in interpreting analysis results. You must have a PhD in Statistical Genetics, Genetic Epidemiology, Mathematics, or a related field with 2-3 years of postdoc experience, including programming experience (e.g. Fortran, C/C++, and Perl).

Scientist, Technology Development

Help evolve methods for marker discovery and selection for the Predictive Medicine group, focusing on transcriptional profiling and development of a non-isotopic ISH platform for oncology marker selection and diagnostics. We require a PhD in Molecular Biology or a BS with 7-10 years of relevant lab experience and proven experience in transcriptional profiling, SNP discovery and genotyping, ISH, nucleic acid amplification and labeling, or high throughput genomics applications.

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You'll lead a staff of 8-15 chemists (PhD, MS, BS), and will help recruit experienced medicinal/synthetic chemists from other pharmaceutical companies and academic institutions to evolve an integrated chemistry group. In addition, you will participate in building a robust preclinical candidate pipeline and develop specific strategies for the ongoing chemistry programs.

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Assistant Professor, Host-Microbe Interactions

The candidate should utilize genetic and biochemical approaches to study the interaction of prokaryotes or viruses with their hosts. Preference will be given to candidates with expertise in host immune responses to viral/bacterial pathogens. Applications should be submitted to: Host-Microbe Search Committee, Department of Biochemistry and Molecular Biology, 108 Althouse Laboratory, Box 433-S, Penn State University, University Park, PA 16802.

Assistant Professor, Prokaryotic Development

The candidate should utilize genetic and biochemical approaches to study bacterial differentiation and/or development. Preference will be given to individuals who are using DNA microarrays and whole-genome approaches in their research program. The successful candidate will be expected to contribute to the ongoing development of a University-wide graduate program in Microbial Biology. Applications should be submitted to: Prokaryotic Development Search Committee, Department of Biochemistry and Molecular Biology, 108 Althouse Lab, Box 234-S, Penn State University, University Park, PA 16802.

Assistant or Associate Professor, Genomics/Bioinformatics

The candidate's research interest should be in Genomics, including functional genomics, proteomics, bioinformatics, or computational molecular biology. The individual is expected to conduct innovative research that integrates computational methods and biochemistry/genetics to address fundamental issues in genomics. The successful candidate will also contribute to the development of a new Center for Genome Studies. Applications should be submitted to: Genomics/Bioinformatics Search Committee, Chair, Department of Biochemistry and Molecular Biology, 108 Althouse Lab, Box 206-S, Penn State University, University Park, PA 16802.

Assistant Professor, Structural Biophysics

The candidate's research interest should be in the general area of structural and/or membrane biophysics. Research areas of particular emphasis include energy transduction (respiratory complexes, photosynthetic electron transfer), energetic processes (bacteriorhodopsin, ion pumps), and biogenesis and mechanisms of metalloproteins. The successful candidate will investigate structure/function relationships using spectroscopic techniques that would complement the expertise of present members of the Biomolecular Structure Function Group at Penn State. Such techniques include, but are not restricted to, advanced EPR spectroscopy, vibrational spectroscopy, and/or single atom spectroscopy. Candidates should be willing to collaborate with others in the Biomolecular Structure and Function Group. Applications should be submitted to: Structural Biophysics Search Committee, Dr. John H. Golbeck, Chair, Department of Biochemistry and Molecular Biology, 108 Althouse Laboratory, Box 310-S, Penn State University, University Park, PA 16802

Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

Department of Veterinary Science

The Pennsylvania State University's College of Agricultural Sciences is among the largest premier agricultural colleges in the nation, both in student enrollment and agricultural research programs. Furthermore, the Department of Veterinary Science has taken a lead role in meeting new challenges in the basic sciences related to animal and human health. As part of a continuing effort to attract successful researchers and educators in the biological sciences, we are offering three tenure-track appointments. Penn State fosters excellence in research and teaching in a highly collaborative environment. There are excellent opportunities for interactions with faculty in several departments as well as with the rapidly growing, interdisciplinary research efforts in Penn State's Life Sciences Consortium, and the newly created Environmental Consortium. The Department of Veterinary Science contains a critical mass of faculty in the areas of immunology, toxicology, and animal health research, and additional faculty recruitment is directed toward these strengths. State-of-the-art core facilities exist for cell biology, microarrays and transgenic animal models, and centers of excellence, including the Center for Molecular Toxicology and Carcinogenesis and the Molecular Immunology Research Laboratories, offer unique and diverse research experiences. (See http://www.vetsci.psu.edu for more information about our department.)

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Applications are invited for an Environmental Toxicologist with an international reputation at the level of Professor in the area of chemical carcinogenesis. An endowed chair and an excellent laboratory space in the new Life Science Building are possible for a qualified individual. Areas of emphasis include xenobiotic metabolism, DNA repair, and tumor promotion and integration into the existing focus in molecular toxicology is anticipated. The candidate is expected to maintain an externally funded research program and provide leadership in the area of carcinogenesis and will become a key member in Penn State's interdisciplinary programs in the Life Sciences Consortium and the Environmental Consortium. The candidate should possess a Ph.D. or equivalent degree and an established research program. Candidates must have a strong commitment to teaching both at undergraduate and graduate levels, as well as demonstrated program leadership and the ability to collaborate with others. Applicants should submit a curriculum vitae, a brief statement of research interests and the name, address, telephone number and email address for four references to: Dr. Gary H. Perdew, Chair, Faculty Search Committee, Penn State University, 226 Fenske Building, University Park, PA 16802, ghp2@psu.edu

Applications will be accepted until February 28, 2001, or until a qualified candidate is identified.

Assistant Professor, Virologist

Applications are invited for a faculty position at the level of Assistant Professor in the area of virology and animal health. The candidate will be expected to develop and maintain an externally funded research program focusing on animal-human viral pathogenesis and host responses to viral infections. Preference will be given to individuals with excellent potential to develop research programs focusing on mechanisms of host defense, avian viruses, viral transmission and tropism, or pathobiology. Also, the candidate is expected to actively participate in undergraduate and graduate teaching in the area of microbiology and infectious diseases. The successful candidate will be joining a group of scientists with a general interest in animal health and with research strengths in infectious disease and immunology. Qualified applicants should possess a Ph.D., D.V.M/Ph.D, M.D./Ph.D. or equivalent degree with post-doctoral training in virology, immunology, microbiology or related discipline. Competitive start-up package and salaries are available. Applicants should submit a curriculum vitae, a brief statement of research interests and the name, address, telephone number and email address for at least three references to: Dr. Andrew J. Henderson, Chair, Faculty Search Committee, Department of Veterinary Science, The Pennsylvania State University, 115 Henning Building, University Park, PA 16802, aih6@psu.edu

Applications will be accepted until December 31, 2000 or until a qualified candidate is identified.

Assistant Professor, Molecular Toxicologist

Applicants are invited for a faculty position at the level of Assistant Professor in the area of molecular toxicology as it relates to oxidative stress, signal transduction, and carcinogenesis. The candidate is expected to develop a competitive, externally funded research program focused on molecular toxicology and carcinogenesis. Preference will be given to candidates with potential to develop a research program focusing on oxidative stress and cancer, redox sensitive transcription factors, regulation of gene expression by xenobiotics, and chemical carcinogenesis. Candidates must have a strong commitment to a research and teaching career and demonstrate the ability to collaborate with others. The candidate should possess a Ph.D. or equivalent degree with postdoctoral research training in toxicology, molecular biology, biochemistry, pharmacology or related discipline. Applicants should submit a letter of application, curriculum vitae, a one- to two-page statement addressing research goals, strategies and research interests, and the names and addresses of four professional references that can evaluate the applicant's research and teaching potential. The materials should be sent to: Dr. John P. Vanden Heuvel, Chair, Faculty Search Committee, Department of Veterinary Science, Pennsylvania State University, 226 Fenske Building, University Park, PA 16802,

Applications will be accepted until December 31, 2000 or until a qualified candidate is identified.

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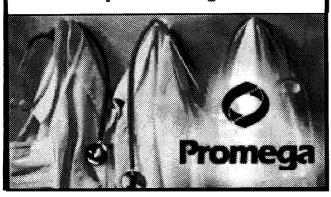
Genetic Analysis

Direct the research activities relating to the investigation/ development of new technologies and products as well as project leaders in the management of projects related to their technology area; identify key technologies/ opportunities and prepare proposals for product development; and hire, coach, mentor and develop scientific staff.

A Ph.D. in Molecular Biology, Eukaryotic Genetics, Biochemistry or related discipline with extensive experience in nucleic acid amplification and detection methods, comparative genomics or gene mapping, a minimum of 5 years' project management experience and experience recruiting/hiring and working with scientists at various levels are required. The ability to maintain an effective global network of scientific peers and contacts while managing the emergence of science of technology globally; effectively manage multiple projects within defined timelines; and to travel domestically and internationally is also essential. Experience leading projects in a commercial research entity is preferred.

Qualified candidates please forward resume to: **Promega** Corporation, Human Resources, 2800 Woods Hollow Rd., Madison, WI 53711. Fax: 608-277-2601. E-mail: hr@promega.com. EOE

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Signal is committed to the innovative application of functional genomics and proteomics technologies for the discovery and validation of signal transduction targets and drugs.

BIOINFORMATICS-SCIENTIST II

Candidate should possess a Ph.D. in the Biological/Physical Sciences or Bioinformatics. Experience in the drug industry (biotech or pharmaceutical) is highly preferred. The position requires a broad knowledge of cellular signal transduction, as well as an understanding of computational tools used to help formulate project plans and achieve project goals. Knowledge of computer operating systems should include UNIX, LINUX, and Windows NT/95/98. Knowledge and experience in software tools and algorithms such as BLAST, hidden Markov models, and/or dynamic programming is required. Software experience with Perl, Java, PHP, Python, SQL, HTML, XML, and/or CGI programming also is desirable. Experience in modeling complex scientific data and processes is a plus. Excellent organizational and communication skills required. Must be an independent thinker, self-starter, and a good team player. (Job Code: SSBI)

Positions are commensurate with the experience level of the candidates. The Signal Research Division of Celgene Corporation, offers a competitive compensation package that includes equity participation. Please send resume, indicating Job Code to: Celgene Corporation, Attn: L. Cain, 5555 Oberlin Dr., San Diego, CA 92121 or E-mail at kain@signalpharm.com
See our website at www.signalpharm.com EOE



MAYO CLINIC TRANSPLANTATION BIOLOGY RESEARCH PROGRAM

The Transplanation Biology program at the Mayo Clinic is seeking faculty for tenure or tenure-track positions in the program. The ideal applicant will be excited about developing an independent, cutting-edge basic science research effort, and at the same time participating in a highly interactive, multidisciplinary program. The program will consist of scientists working in the areas of cellular, molecular, and structural biology, biochemistry and immunology as they apply to fundamental issues in transplantation biology. Members of the program will also have appointments in the Mayo Medical School and Mayo Graduate School.

For more information, visit the Mayo Clinic Research website: http://www.mayo.edu/research/research.html. To apply, please send a cover letter describing your research interests, a curriculum vitae and the names and addresses of three references to:

Jeffrey L. Platt, MD
Transplantation Biology Research Program
Mayo Clinic
Medical Sciences Building 2-66
Rochester, MN 55905

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Merck Research Laboratories (MRL), a world leader in creative and innovative Biological and Pharmaceutical Research to produce novel medicines, is recruiting a limited number of excellent scientists with significant leadership potential, for our laboratories in North America (Rahway, New Jersey; West Point, Pennsylvania; San Diego, California; Montreal, Quebec, Canada). We are seeking scientists representing all of the major disciplines involved in the process of drug discovery.

RESEARCH SCIENTISTS

Within MRL, scientists from all biological disciplines work together with one of the world's strongest Medicinal Chemistry and Natural Products programs in the full range of therapeutic areas. These include disorders of the Central Nervous System, such as schizophrenia and depression, Alzheimer's disease, stroke, and pain. Endocrine disorders such as diabetes, atherosclerosis and obesity, and osteoporosis are major areas of Merck expertise. Cardiovascular disease in all its forms and inflammatory diseases such as osteoarthritis, rheumatoid arthritis, asthma and allergies, and allograft rejection are also fully represented, as are cancer biology, all forms of infectious disease, and vaccine research.

Drug and vaccine discovery programs at Merck employ the full spectrum of techniques used in the biological sciences, including molecular genetics and genomics, electrophysiology, cell biology and biochemistry, allied with natural product and high-throughput screening, animal physiology, and pharmacology. The record of drug discovery achievements and scientific publications produced by Merck Research Laboratories amply demonstrates the breadth and quality of our research endeavors. A listing of scientific publications for 1999 can be found at our Web site at www.merck.com/mrl/staffpub/home.html or write to the address below.

Successful applicants may be drawn from any discipline, but must have a minimum of two years of postdoctoral experience, a superlative record of accomplishment in research demonstrated by a strong publication record, and excellent communication skills. We are looking for candidates that share our core research values in the development of innovative medicines for the treatment of disease.

Our salaries, benefits and growth potential are excellent. Applicants interested in working at any of our sites should send their CV (including names and addresses for three potential references) c/o Mary Ann O'Halloran, Ad #119, Merck & Co., Inc., P.O. Box 2000, RY80M-190, Rahway, New Jersey 07065. Or e-mail:

mary_ann_ohalloran@merck.com (please reference Ad #119 in subject line). If applying by E-mail, please attach your resume, preferably in the form of an MS Word attachment. Merck Research Laboratories is an equal opportunity employer.



Postdoctoral Positions in Biochemistry University of Missouri-Columbia

Dr. Lesa Beamer

X-ray crystallography; structural studies of proteins involved in human disease

Dr. Susan Deutscher

Antibody engineering, nucleic acid protein interaction

Dr. David Eide

Molecular biology of metal ion transporters and their regulation

Dr. David Emerich

Symbiotic nitrogen fixation

Dr. Jeanne Erickson

Environmental microbiology, nutrient cycling, pathogens in waters and soils

Dr. William Folk

Animal cell DNA replication; plant tRNA expression

Dr. Tom Guilfoyle

Auxin-regulated gene transcription; plant transcription factors

Dr. Gretchen Hagen

Auxin-regulated gene expression

Dr. Mark Hannink

Oncogenesis; nuclear-cytoplasmic transport

Dr. Gerald Hazelbauer

Transmembrane receptors and signaling in bacterial chemotaxis

Dr. Dennis Lubahn *Cloning ER-gamma*

D. T. M. L.

Dr. Tom MawhinneyGlycoprotein genetics and disease

Dr. Ruth MacDonald

Phytonutrients in cancer using transgenic animals and clinical trials

Dr. Bruce McClure

Pollination biology

Dr. Joe Polacco

Plant genomic analysis of nutrient sensing and uptake; Ni metalloenzymes; plant-microbe interactions

Dr. Tom Quinn

Peptide-based radiopharmaceutical development and phage display and synthetic peptide-ligand discovery

Dr. Linda Randall

Protein interactions in bacterial protein export

Dr. Lixing Reneker

Studying signal transduction pathways in mouse eye development

Dr. Frank Schmidt

Combinatorial biochemistry; RNA biochemistry

Dr. Krishna Sharma

Structure-function of lens crystallins

Dr. Grace Sun

Signal transduction and gene expression in the nervous system

Dr. Roger Sunde

Selenium and nutrient regulation of gene expression

Dr. John Tanner

Protein structure and function; x-ray crystallography

Dr. Richard Tsika

Identify cis-acting elements and transcription factors regulating skeletal muscle gene transcription and plasticity

Dr. Steven Van Doren

Structural studies of proteins and of RNA by NMR spectros-

Dr. Judy Wall

Genetics of uranium reduction by sulfate-reducing bacteria

Dr. Shuqun Zhang

MAP kinase in plant defense response

Applicants should send CV and names of two references to:

Postdoctoral Application
Department of Biochemistry
117 Schweitzer Hall
University of Missouri
Columbia, MO 65211

Please specify research interest

The University of Missouri is an Equal Opportunity Institution

NEW YORK STRUCTURAL GENOMICS RESEARCH CONSORTIUM

The Albert Einstein College of Medicine, Brookhaven National Laboratory, Mount Sinai School of Medicine, The Rockefeller University, and Welli Medical College have formed the New York Structural Genomics Research Consortium (NYSGRC) to develop and exploit the technology for high-throughput structural and functional studies of proteins. A National Institutes of Health Center Grant (P50) has been awarded to the NYSGRC under the auspices of the National Institute of General Medical Sciences Protein Structure Initiative (http://www.nih.gov.nigms/funding/psi.html), effective September 29, 2000. Experienced, highly skilled molecular biologists, protein biochemists, X-ray crystallographers, computational biologists, and scientific/technical programmers are encouraged to apply for research and technical support positions within the NYSGRC.

Applicants with Ph.D. or equivalent experience should submit a C.V. and a brief statement of research accomplishments and interests (not to exceed two pages), and arrange for three letters of recommendation to be sent directly to: New York Structural Genomics Research Consortium, Principal Investigator: Stephen K. Burley, The Rockefeller University, 1230 York Ave, Box 78, New York, NY 10021. The closing date for applications is November 15, 2000.

The NYSGRC member institutions are Affirmative Action/Equal Opportunity Employers. Further information about the research program of the NYSGRC and its employment opportunities can be found on the Internet at http://www.nysgrc.org/.

Scienc

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A minimum of a B.S. in Life Sciences (e.g. Biology or Biochemistry), knowledge of computers and related peripherals and excellent communication/organization skills. The candidate will have 1-2 years lab experience working with analytical and/or liquid handling instrumentation. Knowledge or experience with Laboratory Automation, and a willingness to work independently on multiple projects is a plus. Valid drivers license required. Must be willing to travel 50%.

Send/fax/e-mail resume to:

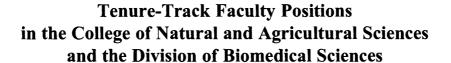
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UNIVERSITY OF CALIFORNIA RIVERSIDE



The University of California at Riverside is in a major phase of growth and development. As a result of our searches last year, we have hired 21 outstanding faculty in the College of Natural and Agricultural Sciences and the Division of Biomedical Sciences. Currently the following tenure-track positions are available in the physical, biological, biomedical, statistical, and agricultural sciences. For Open-level positions, we are looking for outstanding hires at the Professor or the Associate or Assistant Professor levels. Please contact the Web sites listed below for information about the individual positions.

BIOCHEMISTRY—1 POSITION http://www.biochemistry.ucr.edu/about/searches.html Molecular Biology—Open Level

BIOMEDICAL SCIENCES—2 POSITIONS

http://biomed.ucr.edu/faculty/faculty-framer.html

Neuroscience—Open Level

Medical Microbiology—Open Level

BOTANY & PLANT SCIENCES—2 POSITIONS http://www.plantbiology.ucr.edu
Plant Ecology—Open Level
Cell Biology—Open Level

CELL BIOLOGY AND NEUROSCIENCE—1 POSITION http://cnas.ucr.edu/~neuro/home.html
Neuroscience—Assistant Professor

CHEMISTRY/AIR POLLUTION RESEARCH CENTER—1 POSITION http://www.chem.ucr.edu/faculty/search.html
Aqueous Phase/Environmental Analysis Chemistry—
Assistant Professor

CHEMISTRY—4 POSITIONS

http://www.chem.ucr.edu/faculty/search.html

Analytical Chemistry—Assistant Professor
(2 openings)

Analytical Chemistry—Open Level

Organic Chemistry—Open Level

EARTH SCIENCES—1 POSITION http://cnas.ucr.edu/~earth/es.html Biogeochemist—Assistant Professor

ENTOMOLOGY—1 POSITION

http://www.entomology.ucr.edu

Integrated Pest Management—Assistant Professor/
Assistant Cooperative Extension Specialist

Environmental Sciences—4 Positions

http://envisci.ucr.edu/jobs/
Soil-Landscape Relations—Assistant Professor
Environmental Microbiology—Assistant Professor
Environmental Policy—Assistant Professor
Water Quality—Assistant Professor/
Assistant Cooperative Extension Specialist

MICROBIOLOGY—1 POSITION http://cnas.ucr.edu/~micro/microintro.html Microbiology—Assistant Professor

NEMATOLOGY—1 POSITION http://cnas.ucr.edu/~nem/index.html
Sensory Physiology—Assistant Professor

PHYSICS—1 POSITION http://cnas.ucr.edu/~physics/physics/opsdat.html Experimental Condensed Matter Physics—Open Level

PLANT PATHOLOGY—1 POSITION http://cnas.ucr.edu/~ppath/plantpath.html Fungal Cell Biology—Assistant Professor

STATISTICS—2 POSITIONS

http://cnas.ucr.edu/~stat/homepage.htm

Statistical Genomics/Bioinformatics—
Assistant Professor (2 openings)

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The University of Texas at Austin

Senior Faculty Positions The Institute for Cellular and Molecular Biology

The Institute for Cellular and Molecular Biology invites applications for tenuæd Associate Professor or Professor positions, including two Endowed Chair positions. Academic appointments will be held in an appropriate academic unit in the College of Natural Sciences. Candidates should have a well established research program involving application of molecular biological and/or biochemical approaches to important biological problems. The positions carry excellent salaries and start-up packages in a supportive, interactive and interdisciplinary research environment.

The Institute provides administrative and financial support for the University-wide Graduate Program in Molecular Biology and for state-of-the-art core facilities for DNA and protein analysis, electron and confocal microscopy, mouse genetic engineering, DNA microarrays and robotics.

Building on a strong existing faculty, recent hires include Andy Ellington, Mark Estelle, Ellen Gottlieb, Robin Gutell, Adron Harris, Ken Johnson, Bob Krug, Paul Macdonald, Jacek Nowakowski, John Tesmer, Tanya Paull, Ben Liu, Vishwanath Iyer, Jon Huibregtse, Edward Marcotte and David Stein.

Austin is located in the Texas hill country and is widely recognized as one of America's most beautiful and livable cities.

Please send curriculum vitae, summary of research interests, and names of at least three referees to:

Dr. Alan M. Lambowitz, Director Institute for Cellular and Molecular Biology The University of Texas at Austin 2500 Speedway

Austin, Texas 78712-1095 Visit the ICMB Homepage • http://www.icmb.utexas.edu

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POSTDOCTORAL RESEARCH POSITION Experimental Hematology

Postdoctoral positions are available to study the molecular mechanisms of hemoglobin switching and to develop strategies for gene transfer into hematopoietic stem cells. Our program is focused on the development of gene therapy approaches for hemoglobin disorders, particularly severe beta thalassemia and sickle cell anemia. Onco-retroviral and lentiviral vector systems are being developed for stem cell targeted gene transfer. Work is also focused on using gene transfer to protect bone marrow from chemotherapy induced suppression and to provide selectable markers for amplification of genetically modified cells. Recombinant adeno-associated viral vectors are being developed for delivery of genes to the liver for the treatment of coagulation factor deficiencies. Successful candidates will have a strong background in cell and molecular biological techniques as reflected by a track record of productivity and peer-reviewed publications. Qualified M.D., M.D./Ph.D. and Ph.D. candidates should send a letter of interest and curriculum vitae to: Arthur W. Nienhuis, M.D., Division of Experimental Hematology, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis, TN 38105.

www.stjude.org

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Assistant Professor Molecular and Environmental Microbiology University of Colorado at Boulder

The Department of Molecular, Cellular and Developmental Biology (MCDB) and the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado at Boulder seek applicants for a tenure-track faculty position in microbiology. Preference will be given to candidates at the Assistant Professor level, but all applicants will be considered. The successful candidate will have a record of scholarly achievement in molecular and environmental microbiology with an emphasis on prokaryotic molecular biology and be interested in collaborative research in environmental sciences. Research areas of special interest include a) the application of molecular methods to problems in environmental sciences and b) extremophile biology. For more information about MCDB and CIRES, please see our Web sites at http://mcdb.colorado.edu and http://cires.colorado.edu.

Applicants should send a cover letter, curriculum vitae and a statement of research plans and arrange for three letters of reference to be sent to

Professor Norman Pace
Professor Shelley D. Copley
Microbiology Search Committee
Cooperative Institute for Research in
Environmental Sciences
Campus Box 216
University of Colorado at Boulder
Boulder, CO 80309-0216

The search committee will begin considering applications on Oct. 31, 2000, and the search will continue until the position is filled.

The University of Colorado is committed to diversity and equality in education and employment.



The Picower Institute for Medical Research

RESEARCH POSITIONS IN MOLECULAR MEDICINE

The mission of The Picower Institute for Medical Research is to apply the insights gained from basic laboratory and clinical research to the cure of disease and the improvement of human

health.

The Picower Institute for Medical Research is a fully independent, medical research organization. We seek innovative and dynamic individuals interested not only in doing research, but also having their research translated into clinical application. Our highly interactive and interdisciplinary research faculty of well-published, collegial scientists interact in carrying out focused research programs in molecular medicine.

We have a Ph.D. program in Molecular Medicine chartered by The University of the State of New York, open to M.D. graduates. We also publish the international research journal, "Molecular Medicine". We have opportunities available in these laboratories and research areas working under the respective faculty:

David Callaway, Ph.D., Director, Laboratory of Protein Chemistry

Research focuses on constructing and evaluating a molecular model of amyloid fibril formation in Alzheimer's Disease. This includes the development of assays for evaluating inhibitors of fibril formation and their subsequent use for drug discovery. Expertise in peptide chemistry, HPLC, gel electrophoresis, CD spectroscopy, and fluorescent labeling is required.

Marc Symons, Ph.D., Director, Laboratory of Molecular Oncology

Elucidation of the mechanisms that control cell proliferation and invasion in malignant growth. Emphasis is on the signaling pathways that are governed by the Rho family of GTPases.

Christine Metz, Ph.D., Director, Laboratory of Vascular Biology

Research in areas related to understanding the interaction between the endothelium and the immune system. Interest is in inflammatory angiogenesis.

Barbara Sherry, Ph.D., Director, Laboratory of Cytokine Biology

Interactive NIH-funded program focused on chemokine responses in inflammation and infection. Current projects include chemokine/chemokine receptor regulation in bacterial infection and malaria; in vivo and in vitro systems, cellular and molecular approaches, and cell signaling.

Maria Ruggieri, Ph.D., Director, Laboratory of Cell Signaling

Understanding the mechanisms that mediate suppression of apoptosis in cancer cells, particularly the signal transduction pathways downstream of survival factors that play important roles in transformation. Ph.D. Degree in Biology with experience in molecular biology and/or biochemistry required.

Michael McDevitt, M.D., Ph.D., Director, Laboratory of Experimental Hematology

Projects include investigating abnormal transcriptional regulation in bone marrow failure conditions and leukemia; positional cloning of tumor suppressor genes involved in breast cancer carcinogensis.

Applicants with a proven track of experimental research are encouraged to forward a c.v., a brief research plan: along with a list of publications, references, and indication of laboratory of interest, to: Search Committee-L, The Picower Institute for Medical Research, 350 Community Drive, Manhasset, New York 11030, USA; Fax #: 516•869•0629; e-mail: hr@picower.edu. We also invite you to write to the specific Laboratory Director for additional information. We are equal opportunity/affirmative action employer m/f/d/v.

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Technologist, Chemistry/Biochemistry (#993)

Requires a BS/MS in Chemistry, Biochemistry or Chemical Biology to join a team of Molecular Biologists, Chemists and Engineers involved in new microarray technologies. Work will include the development and scale-up of products involving high-density microarrays and other assays for HTS, with special emphasis on chemical and physical properties. Biology/Biochemistry background is a must. Industrial experience and strong grounding in Chemistry and/or Materials Science preferred.

Technologist, Molecular Biology/Biochemistry (#2050)

Requires a BS/MS in Molecular Biology or Biochemistry and 5+ years of applicable industrial experience to join a team of Molecular and Cell Biologists, Biochemists, and Biomaterials Scientists involved with high-sensitivity assays related to DNA, cell and protein arrays. Work will include the development of DNA-based multiplex assays involving high-density microarrays and microplate-based assays for HTS using state-of the-art detection technologies. Candidates must have knowledge of: nucleic acid and protein structure and related enzymology; cloning; DNA/RNA extraction; purification techniques; reverse transcription; enzymatic amplification schemes; fluorescent labeling; and hybridization. Familiarity with microarray-based assay development (i.e. image analysis, data interpretation) preferred.

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Science

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Applicant should have a B.S. in Biomedical Engineering, Biochemistry or other related field and 1-2 years lab experience in pharma-biotech automation. Must demonstrate scientific skills and ability to program, develop and test automated liquid handling systems. The candidate must have the ability to work with mulitfunctional teams and customers.

Applicants must enjoy working in fast paced engineering environment and have the ability to work on multiple projects simultaneously. Strong written and verbal communication skills required.

Send/fax/e-mail resume to:

Human Resources Department
Packard Instrument Company
2200 Warrenville Road • Downers Grove, IL 60515
Fax: 630-969-6511

Email: pi-jobposting@packardinst.com Visit our website: www.packardinst.com



EOE M/F/D/V

Plant Developmental Biologist and Plant Ecologist Miami University, Oxford, Ohio Department of Botany

Applications are invited for two tenure-track Assistant Professorships, beginning August 2001 on the Oxford campus, to join a broadly based department committed to educational/scholarly excellence, faculty/student diversity, and international preeminence as a comprehensive botanical program. Ph.D. in botany closely related discipline and commitment to teacher-scholar excellence required Postdoctoral experience is preferred. Candidates will teach introductory/advanced courses, develop a vigorous, extramurally funded research program, and mentor student research.

Plant Developmental Biologist: We seek a botanist using molecular genetic approaches to address fundamental/applied questions on plant organ, tissue, or cell development, to complement our programs in structural/developmental botany, plant molecular biology, and functional genomics. Teaching duties include an introductory course in botany/biology, upper division/graduate offerings, and participation in the Graduate Molecular Biology Program.

Plant Ecologist: We seek a plant ecologist to establish an active community or landscape level program, advise students in field-oriented research, teach an introductory non-majors course and courses in plant ecology/community sampling methods, participate in interdepartmental graduate ecology courses, and interact with a strong group of ecologists/environmental scientists across the University in curricular initiatives.

The Botany department (17 full-time/4 affiliate faculty, 36 graduate/85 undergraduate students) offers B.S./A.B. through Ph.D. degrees in Botany and an M.A.T. in Biological Science. The Oxford campus, 32 miles NW of Cincinnati, has over 16,000 students and is ranked among the top national public universities. The Turrell Herbarium, an Electron Microscopy Facility, Ecology Research Center, and Center for Bioinformatics/Functional Genomics, and HHMI grant offer support (see www.muohio edu for additional information). Applications (curriculum vitae; teaching statement including experience, interests, and philosophy; statement of research goals; three or fewer reprints/preprints) and three reference letters should be sent to: Dr. Roger Meicenheimer, Chair, Plant Development Search, or Dr. David Gorchov, Chair, Plant Ecology Search, Dept. of Botany, Miami University, Oxford OH 45056. Fax (513) 529-4243. Screening begins 1 November 2000. Miami University is an equal opportunity affirmative action employer.

Scientific Software Systems Professionals

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The outstanding success of Schering-Plough stems from a basic commitment to scientific research and development. R&D spending, which totaled \$1.2 billion in 1999, has nearly doubled in the past 5 years...with expenditures in the current year expected to increase by about 15%

At Schering-Plough Research Institute (SPRI), we are pursuing new leads in targeted therapeutic areas and assembling a product pipeline that will address pressing health care issues today and well into the future. To help speed the selection and development of new therapeutic candidates, new technologies have been fully integrated into SPRI's drug discovery and development process. These technologies include genomics, combinatorial chemistry, automated high-throughput screening of chemical and natural product libraries, and structure-based drug design.

You can be part of our exciting growth environment if you meet the requirements of any of the following truly ground-floor opportunities with the Scientific Systems Department of Research Information Systems, charged with developing and supporting scientific information systems for internal clients in Discovery R&D and Operations within SPRI. The successful candidates will be customer-support focused, goal-oriented agents-of-change with strong interpersonal skills. The openings are based at our state-of-the-art research campuses in North Central and rural Northwestern New Jersey, both an hour or less from New York City.

Project Manager

BS in Life Sciences, Computer Science, Engineering or Information Systems Management with experience in project leadership/ supervision for the development, maintenance, and support of vendor and proprietary research software for complex scientific systems. Experience in software validation and information systems regulatory compliance highly desired. Job Code: XHXRI9912

Senior Scientific Systems Analyst -Structural Chemistry

MS or Ph.D. in Chemistry or related field with experience in development, maintenance, support of computational chemistry software. Responsible for development, maintenance and support of vendor and proprietary research software for computer aided drug design, protein NMR and protein crystallography. Experience with UNIX systems, modern programming languages, and standard computational chemistry software packages a must.

Job Code: XHXR19938

Senior Scientific Systems Analyst -**Discovery Research**

MS or Ph.D. in Life Sciences and experience in development, maintenance, support of scientific and lab automation software. Responsible for development, maintenance and support of vendor and proprietary research software for lab automation and data analysis in support of a variety of pharmaceutical discovery research and technology programs. Job Code: XHXRI2016D

Lead Scientific Systems Analyst - Drug Metabolism

MS or Ph.D. in Life Sciences with experience in development, maintenance, support of scientific and lab automation. Experience in information systems regulatory compliance highly desired. Responsible for development, maintenance and support of vendor and proprietary research software to provide lab automation and data analysis for Drug Metabolism and Pharmacokinetics research.

Job Code: XHXRI2016G

Senior Scientific Systems Analyst -**Discovery Informatics**

MS or Ph.D. in Life Sciences with experience in development, maintenance, support of scientific and lab automation software. Responsible for development, maintenance and support of vendor and proprietary research software for lab automation and information management in support of pharmaceutical discovery research. Job Code: XHXR12016C

Senior Scientific Systems Analyst -**Drug Safety & Toxicology**

BS in Life Sciences, Computer Science, Engineering or Information Systems or related field and experience in development, maintenance, support of scientific software. Experience in information systems regulatory compliance highly desired. Responsible for development, maintenance and support of vendor and proprietary research software to provide data collection, analysis and reporting for Drug Safety & Toxicology research. Job Code: XHXRI9913

Senior Scientific Systems Analyst -**Bioinformatics**

MS or Ph.D. in Life Sciences with experience in development, maintenance, and support of computational biology software. Responsible for development, maintenance and support of vendor and proprietary research software for bioinformatics. Experience with Perl, UNIX systems, and standard bioinformatics software packages a must. Job Code: XHXRI2016B

Senior Systems Analyst -**Drug Safety & Metabolism Systems**

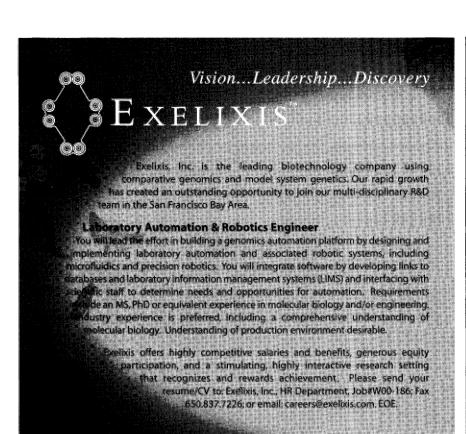
BS in Computer Science, Math, Life Sciences or related field. Responsible for implementation and monitoring of application development and production support practices in compliance with policy, procedures and regulations. Will also maintain written systems. Job Code: XHXRI2016F

We offer an excellent compensation package that includes a competitive salary, a cash incentive bonus program, profit sharing and 401(k) plan. Comprehensive benefits include group insurance and retirement programs, flexible work arrangements, education assistance, and health and wellness programs.

For prompt, confidential consideration, we invite you to apply on line or forward your resume, which MUST include Job Code for position of interest, to: E-mail: sprisc@resume.isearch.com or Mail: Human Resources-JM, Schering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, NJ 07033-1300. We are an equal opportunity employer. We regret that we are unable to respond to each resume. Only those selected for an interview will be contacted.

For additional information, or to apply online, visit our website at: www.sp-research.com





CELL BIOLOGY/BIOCHEMISTRY Tenure Track Faculty Position Bowdoin College

The Biology Department and Biochemistry Interdisciplinary Program of Bowdoin College invite applications for a tenure track position in Cell Biology/Biochemistry at the Assistant or Associate Professor level beginning Fall 2001. The position is a joint appointment in Biology and Biochemistry. Teaching responsibilities, which will normally be 3 courses with labs per year, include a course in Cell Biology on a regular basis and additional courses that contribute to both the Biology and Biochemistry major programs, including courses in one's specialty. The successful applicant is expected to maintain an active research program that involves undergraduates. Postdoctoral experience preferred.

Review of applications will begin November 1, 2000. Please send a curriculum vitae, a letter that includes a description of your research interests and teaching philosophy, and the names, email addresses and phone numbers of three references to: Patsy Dickinson, Chair, Biology Department, Cell Biology Search, 6500 College Station, Bowdoin College, Brunswick, ME 04011-8465. For further information about the college, the department, and the program, please see our website: www.bowdoin.edu.

Bowdoin College is committed to Equal Opportunity through Affirmative Action. Women and minorities are encouraged to apply.



Visit our website at www.exelixi

POSTDOCTORAL POSITIONS

REGULATION OF APOPTOSIS IN CANCER AND DEVELOPMENT

Funded postdoctoral positions are immediately available to study novel signaling pathways that regulate apoptosis in hematopoiesis, leukemia and during development (see Packham, et al., Genes & Dev., 1999; Eischen et al., Genes & Dev., 1999). Candidates should have a strong background in molecular and cellular biology. St. Jude Children's Research Hospital offers an exciting and interactive research environment, competitive salary and training packages for fellows. Please send letter of interest and curriculum vitae to:

John L. Cleveland, Ph.D.
Full Member
Department of Biochemistry
St. Jude Children's Research Hospital
332 N. Lauderdale Avenue
Memphis, TN 38105
Email: john.cleveland@stjude.org

equal opportunity employer

BIOINFORMATICS RESEARCHER

Design and evaluate new algorithms, implement new computational tools, target identification and computer PCR primer design. Work closely with wet-bench scientists in analyzing public domain and in-house protein/DNA sequences. Be involved in the design and construction of a Bioinformatics database and software.

You need 1-2 years experience in Bioinformatics, knowledge of database searching and advanced data-mining techniques (e.g. HMMs, PSI-BLAST, Smith-Waterman), experience with SQL and/or visually oriented data-mining systems (a plus), proficiency in Perl, C++, or Java and a UNIX environment is necessary. MS or Ph.D. in a related field.



AxCell Biosciences offers a competitive salary, benefits package, stock options and tremendous growth potential. Submit resume and cover letter, including salary history, to:

AxCell Biosciences HR Dept., 826 Newtown-Yardley Road, Suite 100, Newtown, PA 18940, Fax 267-757-1301, e-mail to hr@Axcellbio.com.

View other opportunities at www.axcellbio.com

JJIIGR THE INSTITUTE FOR GENOMIC RESEARCH

The Institute for Genomic Research (TIGR) is a not-for-profit research institute founded in 1992. The scope of research at TIGR includes structural, functional, and comparative analysis of genomes and gene products in viruses, eubacteria, pathogenic bacteria, archaea, and eukaryotes, both plant and animal, including the mouse, the rat and the human. Additionally, bioinformatics based research projects encompass investigations into genome composition, gene-finding algorithms, sequence assembly and alignment, and modeling of protein structure. TIGR's pioneering approach to genome based analysis produced the first-ever genome sequence of a free living organism in 1995, and TIGR scientists have completed 61% of the genomes and chromosomes in the public domain, making it the world's premier center of whole genome sequencing and analysis. TIGR currently has a staff of 230 including 30 faculty. Please visit our web site at http://www.tigr.org.

Post-Doctoral Fellowships are available on an NCI-funded project to study gene expression in human colon tumor metastasis using microarrays. A strong computational background, including experience with PERL, SQL, and NT and UNIX operating systems is preferred but not required. Responsibilities will include data generation, analysis, and publication of novel results as well as supervision of junior laboratory personnel. Candidates should be highly self-motivated and willing to work in a team-oriented collaborative environment. Please reference job code: 1019

Post-Doctoral Fellowships are available on an NHLBI-funded project to study gene expression in rodent models of human heart, lung, blood and sleep disorders using microarrays. A strong computational background, including experience with PERL, SQL, and NT and UNIX operating systems is preferred but not required. Responsibilities will include data generation, analysis, and publication of novel results as well as supervision of junior laboratory personnel. Candidates should be highly self-motivated and willing to work in a team-oriented collaborative environment. Please reference job code: 1020

Post-Doctoral Fellowship is available in the USDA/NSF/DOE-funded Rice Genome project. This project is focused on sequencing and annotating rice genomic DNA as part of the International Rice Genome Sequencing Project. The successful candidate will participate in the sequencing and annotating BACs from *Oryza sativa* as part of a multi-disciplined team within the Eukaryotic Genomics department. The candidate will be responsible for data analysis and leadership of other team members. Specific responsibilities will include analysis of annotation from chromosomes 3 and 10 of rice, as part of the US effort to complete the entire sequence of these chromosomes. Other responsibilities will be further anlaysis of the annotation results including incorporation of the rice genome sequence data with orthologous sequences from other plant species such as maize, wheat, barley, and Arabidopsis. For more information about this project please visit http://www.tigr.org/tdb/rice. Please reference job code: 1021

Post-Doctoral Fellowship is available on an Office of Naval Research funded project to study gene regulation of pathogenic bacteria using microarrays. The candidate will participate in a program designed to identify essential genes required for pathogenicity using signature tagged mutagenesis. Relevant experience in pathogenicity is preferred but not required. Candidates should be highly self-motivated and willing to work in a team-oriented collaborative environment. Please reference job code: 1022

A Post-Doctoral Fellowship is available on NIAID/DARPA-funded projects to completely sequence the genomes of pathogenic bacteria. A strong computational background, including experience with PERL, SQL, and NT and UNIX operating systems is preferred but not required. Responsibilities will include overseeing day to day processes of genome closure, assisting in annotation and analysis of the genomes, publication of genome data and comparative genomic analyses. Please reference job code: 1023

Qualified candidates will have a PhD in Cancer Genetics, Human Molecular Biology, Genetics, Molecular Biology, Pathogenesis or a related field or the equivalent and experience with standard molecular biology laboratory techniques. Please send a curriculum vitae with the names, phone numbers, and e-mail addresses of three references to: The Institute for Genomic Research, Attn: Human Resources, 9712 Medical Center Drive, Rockville, MD 20850 E-mail: jobs@tigr.org Fax: (301) 838-0208 EOE

2001–02 Congressional Science and Engineering Fellowship Program

PROGRAM: Scientists and engineers spend one year as special assistants on the staffs of Members of Congress or congressional committees, working in legislative areas requiring scientific and technical expertise. The program includes an orientation on congressional and executive branch operations and a year-long seminar program on issues involving science and public policy. Fellows receive stipends from their sponsoring societies.

PURPOSE: To provide a unique public policy learning experience, to demonstrate the value of science-government interaction, and to make practical contributions to the more effective use of scientific and technical knowledge in government.

CRITERIA: A prospective Fellow must be a postdoctoral to midcareer scientist or engineer; demonstrate exceptional competence in some area of science or engineering; be cognizant of many matters in nonscientific areas; demonstrate sensitivity toward political and social issues; and perhaps most important, have a strong interest and some experience in applying personal knowledge toward the solution of societal problems.

SPONSORS: More than **30** national professional scientific and engineering societies will sponsor or cosponsor Congressional Fellows in 2001–02.

American Agricultural Economics Association

American Association for the Advancement of Science

American Association of Colleges of Pharmacy

American Chemical Society

American Dental Association

American Geological Institute

American Geophysical Union

American Institute of Biological Sciences

American Institute of Physics

American Meteorological Society

American Nuclear Society

American Physical Society

American Psychological Association

American Society for Microbiology

American Society of Agronomy

American Society of Civil Engineers

American Society of Human Genetics

American Society of Mechanical Engineers

American Veterinary Medical Association

American Welding Society

Federation of Animal Science Societies

Geological Society of America

Institute of Electrical and Electronics Engineers

Institute of Food Technologists

Institute of Navigation

International Society for Optical Engineering

Materials Information Society

Materials Research Society

Optical Society of America

Society for Research in Child Development

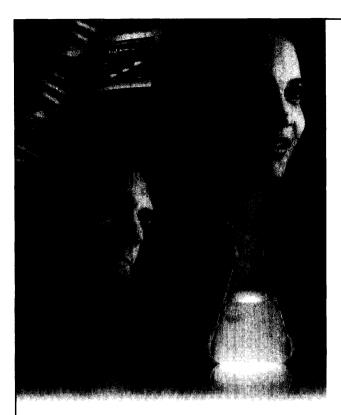
Soil Science Society of America

Applicants should apply directly to the appropriate professional society. It is acceptable to apply to more than one society. Stipends, application procedures, timetables, and deadlines vary by society. Underrepresented minorities and persons with disabilities are encouraged to apply. Further information about the program and a list of the participating societies, with contact information, is available from:



Congressional Science and Engineering Fellowship Program 1200 New York Avenue, NW, Washington, DC 20005 202/326-6700 E-mail: science_policy@aaas.org

Web: fellowships.aaas.org



At Pfizer, we just made the best even better! Pfizer Global Research and Development draws on the expertise of Pfizer and Warner-Lambert to create a vast R&D enterprise with an annual budget of more than \$4.7 billion. If you're intrigued by working with exceptional people on exceptional challenges, maybe yours could be the new face of Pfizer. Explore these opportunities at our research facilities in Groton, Connecticut.

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careers that matter

Research Scientist, Bioinformatics

As a key member of a high-energy multidisciplinary team, you will apply innovative computational methods for analyzing genomic and proteomic data to advance drug discovery and development. You'll have access to world-class collaborations and state-of-the-art databases, analytical tools, and computing resources. You'll need a PhD and 2+ years postdoctoral research experience in Moleculor or Structural Biology, proficiency with current sequence and expression analysis tools, and strong scripting skills in Perl and SQL. Ad Code: 982028SCI

Laboratory Scientist, CNS Discovery

We'll call on you to perform *in vitro* experiments to support the discovery of novel drugs for treating neurodegenerative diseases. Responsibilities include preparing primary neuronal cultures and performing assays of neurotoxicity and neurotrophic activity to evaluate drug effects. You'll use a variety of techniques, including biochemical assays of neurotransmitter uptake, enzyme activity, and neuronal cell death, as well as morphometric and imaging combined with biochemical assays to analyze neurotrophic activity. Along with your BS (MS preferred), you'll need 1-2 years experience and expertise in preparing primary neuronal cultures. Experience in cell imaging, microscopy and morphometry techniques, immunohistochemical techniques, neurochemical assays and maintenance of clonal cell lines is desirable. Ad Code: 0007872SCI

Laboratory Scientist, CNS Discovery

In these key assignments, the successful candidate will perform in vitro/in vivo experiments in research projects directed toward the discovery of novel CNS drugs. Research techniques used will include patch and voltage clamp recording from a variety of cell lines, Xenopus oocytes and primary neurons, and slice preparations. Additional techniques may include confocal imaging for either immunohistochemical or in vitro functional/physiology studies. Desired experience should include in vitro or in vivo electrophysiology studies, and/or physiology using imagine techniques (confocal/nonconfocal). This job requires a BS (MS preferred) in a related field and at least 3-5 years of relevant experience. Expertise in biochemistry assays (Westerns, ELISA) or other interdisciplinary neuroscience skills/techniques is desired. Familiarity or experience with primary cell culture and maintenance of cell lines, slice preparation and recording, and cRNA/DNA preparation are also desirable. Ad Code: 0007085SCI

Pfizer offers an exceptional work environment complete with training opportunities designed to develop your supervisory effectiveness and professional talents. We invite you to apply online at **www.pfizer.com**. Or you can mail your resume, indicating the appropriate Ad Code, to Pfizer Inc, PGRD, c/o Aon Consulting, PO Box 25, Findlay, OH 45839 or email to Pfizer@aon-hros.com. An Equal Opportunity Employer, Pfizer offers a workplace rich with diversity and potential.

FELLOWSHIPS

Applications are invited for postdoctoral fellowships at the Beckman Institute for Advanced Science and Technology at the University of Illinois at Urbana-Champaign. The Beckman Institute is a multi- and interdisciplinary research center that focuses on three main research themes: Biological Intelligence, Human-Computer Intelligent Interaction, and Molecular and Electronic Nano-structures (http://www.beckman.uiuc.edu).

The Beckman Institute Fellows Program provides an excellent opportunity for young scholars to initiate a post-Ph.D. career of independent research in a stimulating and supportive interdisciplinary environment. The fields of research encompassed by the fellowship program include the behavioral and biological sciences, chemistry, physics, and engineering.

Year 2001 Fellows will be appointed for up to 3 years, beginning as early as June 2001, and no later than December 31, 2001. The stipend is \$46,000/year, plus benefits and a research budget. Selection of Fellows is based on evidence of professional promise, capacity for independent word, outstanding achievement to date, and interdisciplinary research interests corresponding to one or more of the Institute's programs. To be eligible, the Ph.D. must have been held for no more than 4 years (i.e., received no earlier than December 1996).

APPLICATION PROCEDURE: Application packets should be requested from: hucal@ uiuc.edu or Kelly Hucal at 217-244-9489. Please include your full mailing address.

DEADLINE: A postmark of no later than Friday, January 5, 2001. Announcement of Fellows on or about April 15, 2001.

The Beckman Institute Fellows Program is supported by funding from the Arnold and Mabel Beckman Foundation. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

2001

ANNOUNCEMENTS



FUNDING AVAILABLE

CaP CURF, the Association for the Cure of Cancer of the Prostate, is soliciting proposals for its 2000-2001 funding year. The organization's goal is to find a cure for advanced prostate cancer.

Applications are competitive and ac cepted from individuals with or without institutional affiliation. Awards range from \$50,000 – \$250,000 for one year. Applications (3-5 pages) can be for clinical investigations, basic research or a combination and must be relevant to the treatment of advanced prostate cancer. We encourage interdisciplinary collaborations between basic scientists and clinic ians. For-profit companies are not eligible. Applications will be accepted August 14, 2000 through September 30, 2000. Notification of awards is expected by December 31, 2000.

For consideration, request application gu idelines:

CaP CURE

1250 Fourth Street, Suite 360 Santa Monica, CA 90401 Phone: (310) 458-2873 Fax: (310)458-8074 www.capcure.org



ASSISTANT/ASSOCIATE/FULL PROFESSOR (MACROMOLECULAR CRYSTALLOGRAPHER)

College of Basic Sciences Louisiana State University

Applications are invited from all faculty ranks for a position in X-ray crystallography. Applications are particularly encouraged at the senior academic levels. The applicant will study the structure and function of biological macromolecules and will have access to a crystallography facility being constructed by a consortium of universities at LSU's synchrotron radiation source, the Center for Advanced Microstructures and Devices (CAMD). The facility will consist of a complete beamline and end-station optimized for state-of-the-art MAD experiments. Technical information concerning the beamline is available at http://www.camd.lsu.edu/gcpcc/. Permanent staff support positions for the beamline are also in place. The candidate will join a well-funded faculty using well-equipped facilities to conduct research on protein structure/ function and structural biology. The successful applicant will hold an academic appointment in either the Department of Chemistry or the Department of Biological Sciences, depending on research interests. Salary, rank, and tenure status will be commensurate with the candidate's qualifications. Applicants must have teaching experience, demonstrated proficiency in X-ray crystallography, and preferably a track record of federal funding and publications. Evaluation of applications will begin on November 1, 2000, and will continue until the position is filled. Send a cover letter, curriculum vitae and statement of research interests. For applications at the Assistant Professor level, please provide three letters of reference. Individuals applying at senior academic ranks should provide the names and addresses of three references All application materials should be sent to:

> Professor Terry M. Bricker, Chair Macromolecular Crystallography Search Committee College of Basic Sciences Ref: #025962 Louisiana State University Baton Rouge, LA 70803-1725

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RESEARCH POSITION OPEN

THE UNIVERSITY OF WISCONSIN
Department of Surgery
Division of Transplantation
Organ Preservation Laboratory

A Ph.D. in biochemistry, physiology, molecular biology or related field with at least two years postdoctoral experience or five years of experience in a research laboratory is sought to develop new approaches to organ preservation.

Expertise in one or more areas such as: ischemia/reperfusion injury, hypothermic storage of organs or tissues, molecular biology of stress responses, oxidative stress, or vascular pathophysiology will be important.

Position will require supervision of research projects of staff at various levels of training (Ph.D. students, technicians, M.D., fellows, and visiting scientist). Position will answer directly to director of the laboratory. Additional skills required include good writing ability and capability to write grants for federal funding agencies.

Appointment will be in the Scientist tract (Academic Staff) at the University and appointment will be at the level of Assistant, Associate, or Full Scientist depending on qualifications and experience.

Salary range will be \$45,000 to \$75,000 per year. The University provides excellent benefits and is an equal opportunity employer. Position will remain open until filled with suitable applicant.

To Apply: Send letter of interest, curriculum vitae, date of availability, and names of at least three references to:

Dr. James H. Southard, Ph.D. Professor and Vice Chairman Department of Surgery Division of Transplantation University of Wisconsin 600 Highland Ave.

Madison, Wisconsin 53792



Executive Dean of Agriculture and Natural Resources Executive Director of the New Jersey Agricultural Experiment Station and Dean of Cook College

Rutgers, The State University of New Jersey, seeks candidates for Executive Dean of Agriculture and Natural Resources with responsibilities for George H. Cook College and the New Jersey Agricultural Experiment Station (NJAES). Cook College serves approximately 4,000 students, offering undergraduate and graduate professional programs through 13 academic departments. Cook/NJAES has a faculty of approximately 300 and a staff of approximately 550. The Agricultural Experiment Station includes 17 research centers and field stations and maintains an extensive network of outreach, including Rutgers Cooperative Extension (RCE), which has agents in each of the state's 21 counties. Cook/NJAES has an annual appropriated budget of approximately \$40 million.

New Jersey's dynamic and diverse economic and cultural environment demands that Cook/NJAES be pluralistic and adaptive in serving an increasingly broad and diverse constituency. Cook/NJAES's vision is to make its name synonymous with solutions: integrating research, teaching, and outreach to respond to issues and challenges in food systems, environment and natural resources, and human and community development. Cook's academic programs are designed to promote the study of these challenges by integrating the natural and physical sciences with the social sciences and humanities, and by using conceptual frameworks that explore human interactions with the earth's system. Rutgers Cooperative Extension maintains a strong connection to the agricultural base of Cook/NJAES, while also emphasizing programs of human and community development in rural, suburban, and urban areas of the state. The successful candidate will work with faculty, staff, students, and external constituents to further build, strengthen, and focus these programs.

Rutgers University is a member of the American Association of Universities (AAU) and eight of its graduate programs are ranked in the top twenty by the National Research Council. The University has over 49,000 undergraduate and graduate students on three campuses-Camden, New Brunswick, and Newark-and last year had over \$185 million in research awards and contracts.

The Executive Dean reports to the University Vice President for Academic Affairs. The successful candidate must be able to balance the demands of leadership of Cook College and the NJAES with the need to maintain and nourish a learning atmosphere that is centered on the Cook/NJAES community of students, faculty, and staff, and must be an established scholar of international stature in the scientific community, with demonstrated excellence in teaching and research. In addition, candidates are expected to provide evidence of administrative achievement; experience in outreach, extension, and service; and demonstrated leadership ability at both the state and university level.

> Nominations and applications should be sent to: Chair, Search Committee **Executive Dean of Agriculture and Natural Resources** Office of the University Vice President for Academic Affairs Rutgers, The State University of New Jersey Old Queens Building Room 302, 83 Somerset Street New Brunswick, New Jersey 08901-1281

An Affirmative Action/Equal Opportunity Employer http://www.rutgers.edu-http://aesop.rutgers.edu

Bioinformatics

Memorial Sloan-Kettering Cancer Center in collaboration with Rockefeller University and Cornell University is accepting applications from qualified candidates to develop a new program in Bioinformatics. This is a unique opportunity to build upon the combined strengths of three premier academic medical institutions located contiguously on the Upper East Side of Manhattan. A generous donation has been received to permit the creation and development of this Program, with the goal of furthering the discipline of Bioinformatics through cutting-edge research, and to develop a core resource to provide collaborative support to the many leading biomedical research laboratories in the three institutions.

The Program will be focused on the development and application of techniques for effectively accessing and utilizing the biomedical information available in human genetic and related databases worldwide. Applicants must be established experts in the field of Bioinformatics, with a substantial track record of scholarly research.

The successful candidate will help recruit additional faculty to build the Program. Although the primary faculty appointment will be at Memorial Sloan-Kettering Cancer Center, the successful candidate will also receive academic appointments at Rockefeller University and Cornell University

Please submit a curriculum vitae, and the names and addresses of at least 3 references to: Colin Begg, Ph.D., Chair, Bioinformatics Search Committee, Box 44, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. E-mail: beggc@mskcc.org. EOE/AA





Lilly: Leading the BioTechnology Forefront





Eli Lilly and Company is seeking individuals with broad experience in the development and characterization of small animal models of disease and their application in the evaluation of experimental biotech based therapeutics.

Candidates will hold a BS/MS degree in the bio-

development and utilization of animal models of

human disease. The primary interest is in rodent

models of inflammatory and autoimmune dis-

eases such as rheumatoid- and osteo-arthritis,

sclerosis. Candidates with experience in models

flexibility to work independently and as part of a

of fibrotic disease will also be considered. The

inflammatory bowel disease and multiple

team of in vivo biologists will be required.

diversity brings to the workplace.

logical sciences and a minimum of 2 years

experience in a laboratory recognized for its

ASSOCIATE SCIENTIST

IN VIVO BIOLOGY



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DIFFERENCE



For confidential consideration, please send your resume and cover letter to: Dr. Joseph Jakubowski, (joseph@lilty.com), Eli Lilty and Company, Lilly Corporate Center, Drop Code 0444, Indianapolis, IN 46285. We are an equal opportunity employer that values the strength



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Answers That Matter.

POST-DOCTORAL POSITIONS

Our Research Center in Indianapolis is the Roche Global Center of Excellence for Drug Monitoring. Our continuing success is based upon the strength of our innovative research, through the study of fundamental biochemical, physical, and chemical processes. The leverage provided by Roche allows us to aggressively pursue novel ideas in a manner that ensures the greatest possibility for success. Currently, we have several positions available for Post-Doctoral Scientists comprising research in

- Molecular Modeling and Structure Determination Protein Structure-Function Analysis and Engineering
- Synthetic and Designed Enzymatic Catalysis
- Polymer Chemistry

Our strong committment to interdisciplinary relationships provides a diverse environment in which concepts and ideas come to fruition. yielding broad opportunity to publish scientific discoveries. These positions are available for Ph.D. scientists who have received their degree in Biochemistry, Chemistry, Chemical Engineering, Material Sciences or a related field, and are seeking a challenging program in the context of a growing industrial sector

Who to contact

For immediate consideration, please send your CV and three letters of recommendation to: Rocks Disgnostics Corporation, 45PDRC, 9115 Hague Road, Indianapolia, IN 46250-0457. Rus more ernation on the scope and objectives of these positions, plants A.B. Shanefelt, Ph.D. Director, Drug Monitoring rch, att armen shanafelt@roche.com. Roche is committed to providing equal opportunity to a diverse workforce.



Roche is a world leading research-based health care organization with principal businesses in pharmaceuticals, diagnostics, vitamins, fragrances and flavors. Roche products and services address prevention, diagnosis and treatment of diseases, thus helping people live

At Roche Diagnostics Corporation we're using our Vision and Values to make a difference. Based in Indianapolis, we are the North American headquarters for Roche's diagnostics business. We are comprised of a dynamic force of individuals who together are enhancing the well being of people and their quality of life. Those with a competitive spirit and commitment to Roche and its customers will find an unmatched environment offering development opportunities and personal rewards.

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Committed

to speed, growth and

Committed to your Future

CANCER CENTER DIRECTOR Sidney Kimmel Cancer Center

The Sidney Kimmel Cancer Center (SKCC) is look ing for an accomplished individual to fill the position of Center Director and Chief Executive Officer.

The Director will play a key role in carrying out the mission and vision of the Center, energizing the laboratory and clinical research programs, and fostering positive relationships between the Center and the community. Ideal applicants should be individuals with an MD and/or Ph.D. degree with a record of accomplishment in cancer research, especially in the development of innovative programs with clinical potential. Additional qualifications include proven leadership and personal abilities to direct a moderate size, growing research institute and success in fund-raising.

SKCC is a not-for-profit cancer research institute with programs in basic, translational, and clinical cancer research and an emphasis on molecular and cell biology and immunology. The Center is located in the rich interactive scientific environment of San Diego's La Jolla research community which includes other 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 home page at http://www.skcc.org.

Interested candidates should submit a complete curriculum vitae and the names and addresses of three references to: Director, Human Resources, Sidney Kimmel Cancer Center, 10835 Altman Row, San Diego, CA 92121. The Sidney Kimmel Cancer Center is an Equal Employment/Affirmative Action Employer.

DIRECTOR UNIVERSITY OF CALIFORNIA VETERINARY MEDICAL CENTER - SAN DIEGO

Applications and nominations are invited for position of Director, UCVMC-San Diego, a new joint venture of the School of Veterinary Medicine, University of California, Davis (UCD) and the University of California, San Diego (UCSD). Will hold joint administrative and professorial appointment in appropriate academic departments at both institutions. Salary and level commensurate with qualifications. Director will develop and coordinate new UCVMC programs located at UCSD and surrounding institutions, including San Diego Zoo and Wild Animal Park, Sea World, Hubbs Research Institute and Navy Marine Mammal program. Responsibilities of professorial appointment will include continuation of successful research program, involvement in curricular development, and teaching of graduate academic and graduate clinical students or professional students as appropriate. Director will be responsible for implementing vision of this unique partnership between School of Veterinary Medicine at UCD and both School of Medicine and Laboratory Animal Medicine Program at UCSD along with zoological programs at San Diego Zoo, Wild Animal Park and Sea World.

Responsibilities include (1) administration of overall program and facilities, (2) management of individual research program in area of expertise, (3) development of long-term plans integrating academic veterinary medical programs in San Diego area, (4) design and implementation of program for development of Center, (5) participation in instructional programs of School of Veterinary Medicine and UCSD Campus, (6) recruitment of world class faculty and staff for Center, and (7) public outreach and development activities in the southern California area

Qualifications include: (1) DVM or equivalent veterinary degree required, Ph.D. and/or advanced training preferred; (2) demonstrated and distinguished research record in area of veterinary or comparative medicine; (3) nationally recognized reputation for career achievement and leadership; (4) broad understanding of biomedical, biological and health sciences; (5) demonstrated administrative/leadership skills; (6) excellent communication skills, willingness to work closely with faculty and other professionals and ability to facilitate multidisciplinary research; (7) demonstrated excellence in teaching including DVM, graduate academic and graduate clinical student training, (8) ability to understand laboratory animal care issues and specialty clinical practice component of Center; (9) experience in acquisition of extramural funding and commitment to work in securing additional funding for programs of Center and (10) potential for integration of surrounding research and practice programs.

Applicants should submit letter of interest, brief statement of vision for future of veterinary/comparative medicine, statement on teaching and research, curriculum vitae and names and addresses of at least three professional references to: Jean A. Weigt, Personnel Officer, School of Veterinary Medicine, University of California, Davis, CA 95616-8734 [telephone: (530) 752-1384; fax: (530) 754-9337]. Nominations should be sent to same address. Applications will be accepted through November 15, 2000 or until filled. AA/EOE



Research Biochemist

Kemin Biotechnology L.C., a wholly owned subsidiary of Kemin Industries Inc, has available a job opening for an experienced research biochemist. Kemin Industries Inc is a worldwide manufacturer of specialty ingredients for the feed industry. The position requires a Masters or a Ph.D. degree in biochemistry or microbiology and a minimum of 3 years experience in research and development. The successful candidate will conduct and lead research on the biochemistry and enzymology of microbial systems. Additional supervisory experience and experience in molecular biology are a plus. Experience with computer spreadsheets and word processing and excellent organizational and communicational skills are a must.

Kemin Biotechnology L.C. offers excellent benefits including continual professional development. Job offer is conditional upon passing a medical examination including a drug screen. Please send applications to

> Kemin Biotechnology, L.C. **Human Resources** P.O.Box 70 Des Moines, IA 50301 Fax: (515)564.0630 E-mail: jobs@kemin.com

Kemin offers a smoke-free environment and is an equal opportunity employer.



ME DEEL HARVARD UNIVERSITY CENTER FOR GENOMICS RESEARCH **FELLOW POSITION**

We are building a community of scholars from a wide variety of fields, including biology, chemistry, physics, mathematics, computer science, and engineering to work under one roof and advance our understanding of complex biological systems.

If you are an exceptional researcher at the post-doctoral level and are interested in interdisciplinary genomics research, you are encouraged to apply for a Fellow position.

As a Fellow, the Harvard Center for Genomics Research (CGR) will fund you and your team of 1-2 post-docs or technicians for 3-5 years to work in one of three general areas: applying genomics to biological problems, developing new experimental methods of collecting genome-wide information, and building new analytic, computational, and theoretical tools for analyzing genome-wide data.

We welcome any technology or problem directed at a system-wide approach to biology. We are particularly interested in fostering small groups of fellows who would use complementary expertise to collaboratively attack important biological problems.

For more information and electronic submission of your application, visit cgr.harvard.edu or mail your application to:

Harvard Center for Genomics Research, 16 Divinity Avenue, Rm. 4104 Cambridge, MA 02138.

Harvard University is an affirmative action, equal opportunity employer.

Panacos Pharmaceuticals is a dynamic new company in the heart of Maryland's booming biotech and pharmaceutical community. Our primary focus is on the development of antiviral drugs and vaccines with novel mechanisms of action that target HIV and other viruses of major medical importance.

We are currently seeking highly motivated individuals with excellent communication and management skills to join our drug discovery and development team. The following positions are currently available and offer the opportunity to play a key role in Panacos' growth and success:

Manager/Director. **Pre-Clinical Development**

B.S. degree (M.S. or Ph.D. preferred) and five years experience in pharmaceutical product development/project management, as well as proven accomplishments in some or all of the following areas:

- •Planning and managing pre-clinical drug development programs
- •Establishing, negotiating and coordinating projects outsourced to contract research organizations and contract manufacturers
- ·Preparation of INDs and other regulatory filings

Senior Scientist, Virology

Ph.D. and post-doctoral experience with strong scientific background in virology, preferably with a focus on HIV or Respiratory Syncytial Virus and accomplishments in one or more of the following areas:

- •Receptor/envelope cloning and expression
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TRAINING



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National Library of Medicine (NLM)

The Medical Informatics Training Program at the Lister Hill National Center for Biomedical Communications provides opportunities for students and visiting scientists to participate in collaborative research in a variety of areas of medical informatics. Research participation at the Center for postdoctoral fellows, graduate and medical students, college students, and visiting faculty can range from a few months to one or more years. Current activities of the Center include:

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- Medical education systems
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- World Wide Web applications Next Generation Internet
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The NLM is one of the National Institutes of Health, the government's primary agency for support and conduct of biomedical research. More details can be seen at our Web site at http://lhncbc.nlm.nih.gov

If you are interested in one of our training programs, contact:

May Cheh; National Library of Medicine 8600 Rockville Pike, Mail Stop 54 Bethesda, MD 20894-6075 (Email: cheh@nlm.nih.gov)

TENURE-TRACK POSITION MOLECULAR NEUROSCIENCE/ NEUROPHARMACOLOGY

The Department of Pharmacology and Toxicology and Institute for Drug and Alcohol Studies at the Medical College of Virginia, Virginia Commonwealth University, invite applications for a tenure-track faculty position. Rank is open, and candidates will be considered based upon experience, qualifications, and potential for success. Applicants must have a Ph.D. or equivalent with at least two years of relevant postdoctoral or postgraduate experience. The successful applicant will also have an outstanding record of research accomplishments appropriate for his/her years of experience as judged by the quality and quantity of research and scholarly publications. The Department has consistently ranked in the top 10 NIH-funded pharmacology departments and is composed of over 40 tenure- and collateral-track faculty and 43 students pursuing Ph.D. and M.S.-degree training. The Department is also under new leadership and is entering a period of significant growth with generous resources available for faculty recruitment and development. Applicants should submit curriculum vitae and the names and addresses of three references by January 1, 2001, to: Search Committee (FO 126), Virginia Commonwealth University, P.O. Box 980613, Richmond, VA 23298-0613. Position description available upon request. VCU is an Equal Opportunity/ Affirmative Action Employer and encourages women, minorities, and persons with disability to apply.

FACULTY POSITION BIOCHEMISTRY/BIOINFORMATICS

The Department of Chemistry and Biochemistry at New Mexico State University invites applications for a tenure-track faculty position as ASSISTANT PRO-FESSOR in the broad area of bioinformatics. We are seeking an outstanding investigator with research experience and interests in one or more of the following areas: structure/function prediction for proteins or nucleic acids; quantitative modeling of metabolism; informatic aspects of transport, signaling, or gene_expression; or functional/comparative genomics. The successful candidate will be qualified to teach core courses in biochemistry and work effectively in a dynamic interdisciplinary environment. Applicants should submit detailed curriculum vitae, copies of transcripts of higher education, a statement of research and teaching interests, and arrange to have three letters of reference sent to:

Chair, Biochemistry/Bioinformatics Search Committee Department of Chemistry and Biochemistry Box 30001, MSC 3C New Mexico State University Las Cruces, NM 88003

Evaluation of completed applications will begin immediately and continue until the position is filled.

New Mexico State University is an Equal Opportunity/ Affirmative Action Employer. Women and minorities are encouraged to apply.

The University of Michigan Department of Ophthalmology and Visual Sciences is seeking to add to its faculty an eye plastic and reconstructive surgery subspecialist. Rank at the ASSISTANT, ASSOCIATE, or PROFESSOR level based on the individual's academic qualifications. Applicants must be certified by the American Board of Ophthalmology; must have taken subspecialty Fellowship training on eye plastics and reconstructive surgery; and must have demonstrated interest and experience in patient care, education, and research. Special interest in cosmetic surgery. Individuals interested in this position should submit their curriculum vitae and bibliography to: Paul R. Lichter, M.D., Bruce Fralick, Professor and Chairman, Department of Ophthalmology and Visual Sciences, The University of Michigan, W. K. Kellogg Eye Center, 1000 Wall Street, Ann Arbor, MI 48105. The University of Michigan is an Equal Opportunity/Affirmative Action Employer and actively seeks diversity in its applicant pool.

POSITIONS OPEN

CENTER FOR BIOINFORMATICS AND COMPUTATIONAL BIOLOGY University of Maryland, College Park

The University of Maryland invites FACULTY APPLICATIONS at all levels for the newly established Center for Bioinformatics and Computational Biology. The campus has substantial resources committed to the Center, including funds for the recruitment of six new faculty with research interests in focused areas of computational genomics such as functional genomics and proteomics. It is anticipated that the primary backgrounds of the new faculty will span computer science, mathematics and statistics, molecular biology, and biochemistry. The primary responsibility of the new faculty will be to lead a focused, nationally visible research program in computational genomics. All the new faculty will be housed in the University of Maryland Institute for Advanced Computer Studies (UMIACS) and will have access to significant high-end computing infrastructure. The new faculty will also be affiliated with at least one of the academic units on campus depending on their interests, with the potential of pursuing research collaborations with nearby outstanding research groups in organizations such as NIH, Celera, TIGR, UMBI, and the Smithsonian. To apply, send a letter of application, curriculum vitae, and a list of suggested names and addresses for letters of recommendation to:

Dr. Joseph JaJa, Chair of Search Committee Center for Bioinformatics and Computational Biology Institute for Advanced Computer Studies University of Maryland College Park, MD 20742

For more information, please contact: Dr. Joseph JaJa; Telephone: 301-405-6722; e-mail: joseph@umiacs.umd.edu. Applications will be accepted until the positions are filled. The University of Maryland is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

SCHOOL OF FORESTRY AND ENVIRONMENTAL STUDIES YALE UNIVERSITY

The School seeks to fill a SENIOR FACULTY POSITION with an eminent scholar and leader in professional forestry. The individual should have a distinguished record of research and be recognized internationally both for leadership and scholarship within the forestry profession. The specific discipline is less important than is the engagement of the individual with science and policy issues affecting the future of forest ecosystems, the interplay between science and society in forest management, and the vital role of forests to sustain environmental quality and economic development in the United States and abroad. Past involvement with forest industry and the public and private forestry sectors is highly desirable. The individual will be expected to pursue original research relating to his/her area of expertise. Involvement with interdisciplinary research teams both within and outside the School to examine important resource issues is also anticipated. Teaching is expected to include graduate-level courses covering aspects of forest management relevant to the individual's background. An interest in undergraduate instruction at Yale College would be welcomed.

Applicants should send their curriculum vitae, a statement of their research and teaching interests, a list of three references, and representative examples of their publications by November 1, 2000, to: Forest Management Position, Yale University, School of Forestry and Environmental Studies, 205 Prospect Street, New Haven, CT 06511 U.S.A. Additional information on this position may be obtained by contacting: Dr. Timothy G. Gregoire, 360 Prospect Street, New Haven, CT 06511-2189 U.S.A. Telephone: 203-432-9398; FAX: 203-432-3809; e-mail: timothy.gregoire@yale.edu.

Yale University is an Affirmative Action/Equal Opportunity Employer. Members of minority groups and women are encouraged to apply.

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR MOLECULAR BIOLOGY MCMASTER UNIVERSITY

McMaster University, a research-intensive institution and leading centre for biological and biomedical research, invites applications for a tenure-track position at the Assistant or Associate Professor level in the Department of Biology effective January 1 or July 1, 2001.

Candidates must hold a Ph.D. in biology or a related field, possess at least one year of postdoctoral experience, and have a productive research record. We are seeking applications from Molecular Biologists who would complement the existing strengths in the areas of cell and developmental biology or genomerelated research. In addition, we encourage applications from individuals with expertise in metabolic engineering. The successful applicant will be expected to establish and maintain an independent and externally funded research program and contribute to the education of undergraduate and graduate students.

Applicants should submit curriculum vitae, a statement of their research goals, a statement of their teaching interests and experience, three of their most important publications, and should arrange for three letters of recommendation to be sent to: Dr. Turlough Finan, Professor and Chair, Department of Biology, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S 4K1 Canada. The closing date for applications is November 30, 2000. Please refer to the position to which you are applying in your covering letter. See website: http://www.science.mcmaster.ca/Biology/Dept.html.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. McMaster University is committed to Employment Equity and encourages applications from qualified candidates, including members of visible minorities, aboriginal peoples, persons with disabilities, and women.

FACULTY POSITIONS (RANK OPEN) CELLULAR AND DEVELOPMENTAL BIOLOGY

Department of Biochemistry, Molecular Biology, and Cell Biology Northwestern University

The Department of Biochemistry, Molecular Biology, and Cell Biology seeks outstanding candidates for multiple full-time faculty appointments (rank open) in the areas of cellular and developmental biology. Candidates should submit curriculum vitae, a list of publications, a research summary and statement of future research objectives, a statement of teaching experience and interests, and four letters of reference. Faculty Search Committee, Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, IL 60208-3500. Review will commence October 1, 2000, but the search will remain open until the positions are lilled. Women and members of minority groups are urged to apply. Affirmative Action/Equal Opportunity Employer.

PLANT PHYSIOLOGY

Le Moyne College, a college of liberal arts and sciences in the Jesuit tradition, has a tenure-track opening at the ASSISTANT PROFESSOR level for the fall of 2001. Successful candidates must have a Ph.D. as well as teaching experience at the undergraduate level. We are seeking a broadly trained Plant Physiologist; perference will be given to candidates with a strong background in molecular biology. Teaching responsibilities will include plant physiology and participation in cell and molecular biology and introductory biology courses. Applicants will be expected to maintain a modest research program and direct undergraduate research. Send curriculum vitae. graduate transcript(s), statement of teaching philosophy, and three letters of reference by October 31, 2000, to: Ms. Lynn McMartin, Director of Human Resources, 1419 Salt Springs Road, Le Moyne College, Syracuse, NY 13214-1399. Le Moyne College is an Equal Opportunity Employer and encourages women, persons of color, and Jesuits to apply for employment.

Research Fishery Biologist and Professor in Population Dynamics

Scripps Institution of Oceanography (SIO), University of California San Diego, and the Southwest Fisheries Science Center (SWFSC), U.S National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, U.S. Department of Commerce, are jointly seeking a Research Fishery Biologist and Professor in population dynamics as applied to fisheries research and management. The successful applicant will hold a half-time appointment in each institution. Responsibilities will range from practical stock assessment (SWFSC) to the teaching and mentoring of graduate students and research (SIO) Research in advanced techniques for resource assessment and/or modeling, incorporating other environmental data, is desirable. Evaluation of opportunities for professional advancement will be coordinated, but will be conducted separately within each institution. Applicants must hold a Ph.D. degree in a relevant field and meet the citizenship requirements defined in the Treasury Postal Service and General Government Appropriations Act

Duties at SIO would include teaching and training of graduate students in applied statistics, and original, peer-reviewed and published research, particularly innovative applications of models and statistical approaches to data on large, real populations ranging from benthic invertebrates through fish to marine mammals. Although the SIO salary will be paid from University sources, the candidate will be expected to obtain extramural funding for research and support of graduate students.

Duties at SWFSC will include analysis of data and advice to fisheries managers through collaborations with the California Department of Fish and Game, the Southwest Region of NMFS, the Pacific Fishery Management Council, and NMFS staff. The appointee will serve as a stock assessment expert in various forums involving assessment and management of coastal pelagic species, depresal species, and highly migratory species.

Appointment will be made at the Assistant or Associate Professor level (SIO) depending on experience and qualifications with salary based on UC salary scales and at GS-0482-13/14 in the Federal salary system (SWFSC). We will begin to consider applications 1 November 2000 and continue until the search is complete. Interested applicants must apply separately for each position. For SIO, applicants should send a curriculum vitae, list of publications, statement of accomplishments and interests, and names and addresses of at least three professional references to:

Fisheries Search Committee c/o Graduate Department Scripps Institution of Oceanography University of California, San Diego 9500 Gilman Drive La Jolla, California 92093-0208, U.S.A.

This information has also been published as Vacancy #W/NMF/SWSC/000458.RJ. Applicants should consult the Web site www.wasc.noaa.gov concerning application to SWFSC/NOAA.

Employment line for WASC/HRD: (206) 526-6294. Contact: Ron Jones, Personnel Management Specialist (206) 526-6407.

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The Molecular Systems group is seeking creative, self-motivated individuals with exceptional interpersonal and problem solving skills to join our scientific team.

The successful candidate will be responsible for the design and optimization of novel drug candidates using advanced computational techniques, or for developing new algorithms to aid in the drug discovery process. In addition to participating in Merck's medicinal chemistry and biology programs, the applicants will be expected to continue research in new areas of molecular modeling relevant to the drug discovery and development process.

Candidates for the applications position must have a Ph.D. in chemistry, biochemistry, biochemistry, biophysics, physics or equivalent with a computational emphasis. Candidates for the development position must have a Ph.D. in one of the areas mentioned above as well as substantial programming experience in C, C++ or FORTRAN. Strong communication skills along with the ability to work well in multidisciplinary teams are essential. Evidence of creative application of computational approaches to problems of biological or chemical interest is necessary. **PAF Code: XHXMRSMKH09029**

BIOANALYTICAL SCIENTISTS

We are seeking scientists to aid in the development and application of analytical methods to evaluate and characterize live virus vaccine components and products. Other duties include participation in project teams, data analysis and preparation of protocols and reports. Strong experimental and leadership skills are essential. Effective written and oral communication skills are required, as is a demonstrated ability to function well as member of a multidisciplinary team.

SENIOR RESEARCH BIOCHEMIST: Ph.D. in virology, molecular biology, cell biology or a related discipline and 1-5 years' post-Ph.D. experience required. Position focuses on development of methods for molecular and immunological characterization of live virus vaccines. Experience in immunoassay development essential; experience with Biomolecular Interaction Analysis preferred. PAF Code: XHXMRSMKH09100

BIOCHEMIST: BS/MS in biochemistry, molecular biology or a related field required. Position focuses on physico-chemical and immunological analysis of live virus vaccines. Bioanalytical laboratory experience, particularly involving immunoassay development, preferred. **PAF Code: XHXMRSMKH90100**

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ASSISTANT PROFESSOR GENE EXPRESSION IN EUKARYOTES

The Department of Biological Sciences at Louisiana State University invites applications for a tenure-track Assistant Professor position (exceptional candidates at the ASSOCIATE level will be considered). Applicants whose research interests focus on eukaryotic gene expression are encouraged to apply. Areas of interest include but are not limited to basic mechanisms of transcriptional regulation, chromatin remodeling, and regulation of RNA processing or protein synthesis and degradation. Applicants are urged to visit our website: www.biology.lsu.edu to learn about our areas of research emphasis. The successful candidate must have a Ph.D. or equivalent degree and will be expected to establish and maintain an extramurally supported research program, supervise graduate students, and teach at the graduate and undergraduate levels. Review of applications will begin November 1, 2000, and will continue until a suitable candidate is identified. Send curriculum vitae, three to five reprints, a statement of research and teaching interests, and three letters of recommendation to: Eukaryotic Gene Expression Committee, c/o Dr. James V. Moroney, Department of Biological Sciences, 508 Life Sciences Building, Louisiana State University, Baton Rouge, LA 70803, Reference Number 026305. E-mail inquiries may be sent to: btmoro@unix1.sncc.lsu.edu. Louisiana State University is an Equal Opportunity/Equal Access Employer.

ASSISTANT PROFESSOR DEVELOPMENTAL BIOLOGY

The Department of Biological Sciences at Louisiana State University invites applications for a tenure-track, ASSISTANT PROFESSOR position in developmental biology, which is anticipated to begin in August 2001. The position is open to all areas of eukaryotic developmental biology. A Ph.D. or equivalent degree and postdoctoral experience are required. The successful candidate will be expected to maintain a vigorous, extramurally funded research program and contribute to teaching at the undergraduate and graduate levels. Applicants should submit curriculum vitae, statements of research and teaching interests, copies of three to five papers, and arrange to have three letters of recommendation sent to: Developmental Biology Search, c/o Dr. Thomas S. Moore, Department of Biological Sciences, Louisiana State University, 508 Life Sciences Building, Baton Rouge, LA 70803, Reference Number 026306. Review of applications will begin November 1, 2000, and continue until the position is filled. Additional information about the Department is available at website: http://www.biology.lsu.edu. Inquiries may be sent by e-mail to: btmoor@lsu.edu. Louisiana State University is an Equal Opportunity/Equal Access Employer.

EVOLUTIONARY ECOLOGY BOSTON UNIVERSITY

The Department of Biology at Boston University invites applications for a tenure-track ASSISTANT or ASSOCIATE PROFESSOR in evolutionary ecology. The successful candidate will have a strong background in organismal biology and theoretical and/or empirical interests that complement existing strengths in the Department's ecology, behavior, and evolution program (website: http://bio.bu.edu/ Focus_Areas/ebe.html). Teaching responsibilities include an introductory course in ecology and an upperdivision course in area of expertise. Applicants should have a Ph.D. with postdoctoral experience, an active research program, and a commitment to excellence in teaching. Applicants should send curriculum vitae, statements of research and teaching interests, copies of publications, and three letters of reference by December 1, 2000, to: Dr. Thomas H. Kunz, Chair, Evolutionary Ecology Search Committee, Department of Biology, Boston University, 5 Cummington Street, Boston, MA 02215. Telephone: 617 353-2432; FAX: 617-358-0760. Contact Jeremy Goodman at e-mail: search@bio.bu.edu. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

TENURE-TRACK POSITIONS IN CELL/MOLECULAR BIOLOGY UNIVERSITY OF TOLEDO

The University of Toledo has recently formed a new Department of Biological Sciences which reflects a major new initiative at the interface of biology and chemistry. Currently, we are seeking to recruit four open-rank tenure-track faculty members to join the existing cell/molecular biology faculty. Candidates should have a research focus in the area of eukaryotic signal transduction to complement existing strengths in cell adhesion, transcription regulation, cancer biology, nematode molecular biology and biochemistry, and plant molecular biology. Facilities include a new \$33 million research complex with state-of-the-art laboratories and an outstanding instrumentation center. Joint appointments with the Departments of Medicinal and Biological Chemistry and Chemistry will be encouraged. Applicants must have a Ph.D. and postdoctoral experience. Successful candidates will have or will be expected to develop an externally funded research program and will participate in undergraduate and graduate instruction. The Department offers B.S., M.S., and Ph.D. degrees. Salary and set-up funds are competitive. Review of applications will begin October 22, 2000, and continue until the positions are filled. The starting date for these positions will be August 2001. These positions are available pending final approval.

Interested candidates should send a letter of application, curriculum vitae, statement of teaching and research interests, and arrange to have three letters of recommendation sent to: Chair, Faculty Search Committee, Department of Biological Sciences, University of Toledo, Toledo, OH 43606-3390. E-mail: pkomuni@utnet.utoledo.edu. The University of Toledo is an Affirmative Action/Equal Opportunity Employer; Minorities/Females/Disabled/Veterans. Qualified women and minorities are encouraged to apply.

CANCER PHARMACOLOGY FACULTY POSITION

University of Oklahoma College of Medicine

A tenure-track appointment at the level of ASSIST-ANT or ASSOCIATE PROFESSOR is available in the Department of Cell Biology for an individual with an established, funded research program in the area of cancer therapy. The successful candidate will join a rapidly growing department with strong interactions with faculty of the five basic science departments in the medical school, the College of Pharmacy, the Oklahoma Medical Research Foundation, and the Dean McGee Eye Institute, and have the opportunity to become part of the newly established Cancer Center at the University of Oklahoma Health Sciences Center. The successful candidate will be expected to maintain an active research program and to assume a major teaching role in the medical pharmacology course. Newly renovated laboratory space, competitive salary, and an attractive start-up package are available. Candidates should have a Ph.D. or M.D. degree. Submit curriculum vitae, a statement of research interests and accomplishments, and names of at least three references to: Dr. Michael C. Koss, Search Committee Chair, Department of Cell Biology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190. Website: http://w3.ouhsc.edu/cell_biology/. OUHSC is an Equal Opportunity/Affirmative Action Employer.

VERTEBRATE PHYSIOLOGY. Wittenberg University, ASSISTANT PROFESSOR, tenure track for August 2001. Applicants should have a Ph.D. (or ABD) and interest in teaching in the undergraduate liberal arts and sciences context. Applicants should send curriculum vitae, statement of teaching philosophy, complete transcripts, and three letters of recommendation to: Timothy L. Lewis, Chair, Department of Biology, Wittenberg University, P.O. Box 720, Springfield, OH 45501. For further information, e-mail: tlewis@wittenberg.edu. Review of applications will begin 1 December 2000 and continue until the position is filled. Wittenberg University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR ENVIRONMENTAL CHEMISTRY AMHERST COLLEGE

A full-time tenure-track faculty position is available for a Ph.D. Chemist with an interest in the environment beginning in July 2001. The successful candidate will be expected to teach introductory courses in general chemistry, upper-level courses in either physical or inorganic chemistry, and to develop courses in environmental chemistry. Participation in interdisciplinary teaching will also be encouraged. She or he will be expected to establish a vigorous research program in which undergraduates can substantively participate. The research program can be drawn from any chemical discipline provided that there is a focus on environmental questions and processes.

Amherst College, a private coeducational liberal arts college of some 1,600 students and 165 faculty located in the Connecticut River Valley of western Massachusetts, participates with Hampshire, Mount Holyoke, and Smith Colleges and the University of Massachusetts in the Five-College Consortium. Applicants should submit detailed curriculum vitae, a description of their teaching and research plans, and should arrange for the forwarding of three letters of reference to: Professor Patricia B. O'Hara, Chairman, Department of Chemistry, Amherst College, Amherst, MA 01002. Review of materials will begin November 17, 2000.

Amherst College is an Affirmative Action/Equal Opportunity Employer and encourages women, minorities, and persons with disabilities to apply.

ANIMAL PHYSIOLOGIST. The Department of Biological Sciences, Southern Illinois University, Edwardsville, invites applications for a tenure-track position at the ASSISTANT PROFESSOR level. We seek applicants with broad training in animal physiology. The successful candidate will share responsibility for teaching an introductory animal systems course for biology majors, animal physiology, and will design an advanced course in animal physiology. Candidates will be expected to participate in nonmajors courses in biology and should exhibit potential for independent and innovative research involving Master's and undergraduate students. Qualifications: a Ph.D. in biology, zoology, or animal physiology. Postdoctoral teaching and research experience preferred. To apply, send a letter of application, a statement of teaching philosophy, a statement of research interests, curriculum vitae, copies of all transcripts, and three letters of reference to: Chair, Animal Physiologist Search Committee, Box 1651S, Department of Biological Sciences, Southern Illinois University Edwardsville, Edwardsville, IL 62026. Review of applications will begin on December 1, 2000, and continue until position is filled. Southern Illinois University Edwardsville is a comprehensive regional university located on a 2,660-acre campus in a semirural setting only 25 minutes from downtown St. Louis. The University is dedicated to excellence in undergraduate education. SIUE is an Affirmative Action Employer.

FACULTY POSITIONS IN BACTERIAL PATHOGENESIS AND MOLECULAR VIROLOGY

The Department of Microbiology and Immunology at Emory University School of Medicine invites applications for two tenure-track positions at the rank of ASSISTANT PROFESSOR. Responsibilities include the establishment of a strong research program with extramural grant funding and participation in graduate and professional student teaching programs. Applications will be reviewed beginning November 1, 2000. Candidates should have postdoctoral experience with significant research accomplishments. Send curriculum vitae, a statement of research interest, and names and addresses of three references to: Virology Search Committee or Bacterial Pathogenesis Search Committee, Department of Microbiology and Immunology, Emory University School of Medicine, Atlanta, GA 30322. Emory University is an Equal Opportunity/Affirmative Action Employer.



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- Molecular Biology
- Microarray

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- Assemblers
 (Opto-mechanical)

ENGINEERING

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- Electronic
- Firmware
- Mechanical

SOFTWARE

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- · Quality Assurance
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NOTE: Please specify the position of interest in your cover letter.

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HOST DEFENSE IMMUNOLOGIST/PHARMACOLOGIST – Ph.D.

We seek an expert in immunological assay development, microbiology techniques and infection models to lead an effort in host defense. The selected candidate will possess a Ph.D. and/or MD combined with 10 years of postdoctoral training in an academic or industrial setting. Experience using *in vitro* and *in vivo* models to define the role of immune signal transduction pathways in host defense is required. The ability to work in a challenging team environment while leading a small group is essential. *Job Code: 99-2232*

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We seek a highly motivated and experienced molecular biologist to lead a state-of-the-art transcriptional profiling group. This group, which is a key component of Pharmacia's global biotechnology platform, is responsible for microarray applications, quantitative PCR and differential display technologies. Although the primary responsibility of the group will be to drive the application and impact of expression profiling analyses in the St. Louis based inflammation, cardiovascular and oncology research groups, it also interacts closely with other Pharmacia research groups in Kalamazoo, Michigan and Nerviano, Italy. The group leader, who will have demonstrated expertise in microarray technology applications, will be expected to work in a results-oriented environment and collaborate with scientists within the therapeutic area groups as well as those in the bioinformatics and functional genomics teams. Excellent communication, writing and interpersonal skills will be essential. *Job Code: 00-3108*

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BIOORGANIC CHEMISTRY

The Department of Chemistry and Biochemistry, in conjunction with the Center for Biomolecular Science and Engineering at the University of California, Santa Cruz, invites applications from outstanding candidates for a tenure-track position in bioorganic chemistry at the **ASSISTANT PROFESSOR** level. Ph.D in chemistry or related field required. The successful candidate will be expected to pursue innovative research at the interface of chemistry and biology and to have a commitment to and talent for teaching at both the undergraduate and graduate levels. Areas of research that complement existing faculty strengths include but are not limited to combinatorial chemistry, de novo design of biomolecules, bioengineering, structural/computational modeling, and design of nanoscale biomaterials. Applicants should submit a letter of application, curriculum vitae, brief description of research, and arrange for three confidential letters of recommendation to be sent to: Chair, Search Committee, Department of Chemistry and Biochemistry, University of California, Santa Cruz, CA 95064. Refer to Provision Number 552 in all correspondence. Applications must be received by December 1, 2000. Visit our websites: http:// chemistry.ucsc.edu/ or http://www.cse.ucsc.edu/ centers/cbe/. University of California, Santa Cruz, is an Equal Employment Opportunity/Affirmative Action/IRCA Employer. Women and minorities are encouraged to apply.

ENVIRONMENTAL VIROLOGIST/ MICROBIOLOGIST

The Department of Molecular Virology and Microbiology at Baylor College of Medicine invites applications for a tenure/tenure-track faculty position at the rank of ASSISTANT or ASSOCIATE PROFES-SOR. An innovative Scientist is sought with an interest in environmental virology/microbiology and the biology of emerging infections. Applicants should have postdoctoral experience and demonstrated research productivity. The successful applicant is expected to pursue an independent research program and to participate in graduate training. Current faculty research activities focus on viral and bacterial gene expression and function, microbial pathogenesis, RNA and DNA viruses of human diseases, oncogenes, and disease prevention. This is an excellent opportunity to join a strong academic department with newly renovated laboratories in the active Texas Medical Center. Send or e-mail your curriculum vitae, names and addresses of at least three references, statement of current research activities, and a description of future plans by November 1, 2000, to: Dr. Mary Estes, Faculty Recruitment Committee, Department of Molecular Virology and Microbiology, Mail Stop BCM-385, Baylor College of Medicine, Houston, TX 77030. E-mail: envir@bcm.tmc.edu. Baylor College of Medicine is an Equal Opportunity/Affirmative Action

ENVIRONMENTAL EDUCATION (EE) FAC-ULTY POSITION. The Appalachian Laboratory (AL) of the University of Maryland Center for Environmental Science (UMCES) seeks to fill a TEN-URE-TRACK POSITION in environmental education. The successful applicant will develop an inno vative program to serve as a state and national model for EE. Opportunities exist for research and training of graduate students. A Ph.D. in ecology or environmental science with experience or training in EE is preferred; education Doctorates with an advanced ecology or environmental science degree will be considered. An entry-level hiring is anticipated, but experienced applicants will receive full consideration. See website: www.al.umces.edu for a complete position description. To apply, send an application letter; résumé; statements of interests and goals for both environmental education and research; and names of four references (plus addresses, telephone and FAX numbers, and e-mail addresses) to: Dr. Steve Seagle, EE Search, UMCES Appalachian Laboratory, 301 Braddock Road, Frostburg, MD 21532. Review of applications will begin October 20, 2000. UMCES is an Affrimative Action/Equal Opportunity Employment Institution.

POSITIONS OPEN

FACULTY POSITION ANIMAL PHYSIOLOGY

The Vancouver Campus of Washington State University invites applications for a tenure-track ASSIST-ANT PROFESSOR position in animal physiology. We seek applicants who can develop a strong, externally funded research program in animal physiology and teach graduate and upper-division undergraduate courses in biology and environmental science. Research emphasis open but could include molecular basis of physiology, disease physiology, environmental physiology, and/or neurophysiology. Required qualifications: Ph.D. in a biological discipline with primary expertise in animal physiology. Desired qualifications: experience in developing and teaching upper-division, college-level courses; successful externally funded research program; strong publication record.

WSU Vancouver offers both undergraduate and

WSU Vancouver offers both undergraduate and graduate programs and is expected to double its student body (currently 1,500) and faculty in the next five years, with science and engineering as an area of emphasis. Research expectations and teaching loads are consistent across the four WSU campuses. WSU, a Tier I research institution, offers competitive salaries and start-up packages. WSU Vancouver is located across the Columbia River from Portland, Oregon, and offers significant opportunities for research, a variety of neighbor institutions and agencies for collaboration, and excellent quality of life.

Send (1) a cover letter discussing training and experience as related to the required and desired qualifications; (2) curriculum vitae; and (3) names, addresses, and telephone numbers of three references postmarked by November 15, 2000, to: Dr. Brian Tissot, Washington State University Vancouver, 14204 N.E. Salmon Creek Avenue, Vancouver, WA 98686-9600. E-mail: tissot@vancouver.wsu.edu; Telephone: 360-546-9630; FAX: 360-546-9037.

Washington State University is an Equal Opportunity/Affirmative Action Educator and Employer.

RESEARCH FELLOW POSITIONS are available in the Department of Molecular Biology (JSCI). The candidate will participate in an interdisciplinary program aimed at exploring various aspects of DNA damage and mutagenesis mediated by membrane autoxidation. Persons with skills in analytical and synthetic organic chemistry, molecular biology, tissue culture, and membrane lipid biochemistry are encouraged to apply.

(RSCI) Seeking a person with experience in molecular virology, including working with small animals. Applicants having experience with immunostaining, ELISA, in situ hybridization, cell culture, and transfection as well as standard molecular biology techniques are encouraged to apply. Ph.D. in biochemistry, chemistry of biology. M.S.-level applicants with three or more years of experience will also be considered.

Please send cover letter, curriculum vitae, and names and contact information of three references to: Ileana Abich, Needleman Building, Room 209, City of Hope, 1500 East Duarte Road, Duarte, CA 91010-3000. FAX: 626-930-5394; e-mail: iabich@coh.org.

CENTER FOR MUSCULOSKELETAL RESEARCH UNIVERSITY OF ROCHESTER

ASSISTANT PROFESSOR, RESEARCH ASSISTANT PROFESSOR, and POSTDOCTORAL FELLOW positions are available for highly motivated Ph.D. and/or M.D. holders with research experience in molecular and cellular biology, developmental biology, and gene therapy. Competitive salaries and benefits will be provided. Applicants should submit curriculum vitae, description of research interests, and three letters of reference to: Dr. Regis J. O'Keefe, Associate Director, Center for Musculoskeletal Research, University of Rochester Medical Center, 601 Elmwood Avenue, Box 665, Rochester, NY 14642. E-mail: regis_okeefe@urmc.rochester.edu. The University of Rochester is an Equal Opportunity/Affimative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSORS. The Institute of Ecology, University of Georgia, seeks (1) a Plant Population Ecologist and (2) a Quantitative Ecologist with modeling skills and demonstrated expertise in evolutionary ecology of disease and/or biodiversity for tenure-track faculty positions. Applicants must have a Ph.D. Postdoctoral experience expected. Primary duties: research in area of expertise, graduate and undergraduate teaching. Review of applications for Position 2 will begin November 7, 2000; however, applications received by November 30, 2000, for Position 1 or by December 1, 2000, for Position 2 are assured of consideration. Early submission of application materials is encouraged. Send a letter of application; curriculum vitae; and statements of research and teaching interests with names and contact information, including telephone numbers and e-mail addresses of four references, to: Director, Institute of Ecology, University of Georgia, Athens, GA 30602. Questions about Position 1 to: M. D. Hunter (e-mail: mhunter@sparc.ecology.uga.edu), Chair, Plant Ecology Search Committee; about Position 2 to: P.A. Gowaty (e-mail: gowaty@ ecology.uga.edu), Chair, Disease Ecology Search Committee. The University of Georgia is an Equal Opportunity Employer/Affirmative Action Institution. African American candidates at all ranks are especially encouraged to apply.

ASSISTANT PROFESSOR MOLECULAR PHYSIOLOGY

A tenure-track Assistant Professor position is now available in a strong and growing program. Special consideration will be given to candidates with expertise in molecular recognition; however, qualified applicants in other research areas will also be considered. Applicants must have several years of postdoctoral experience and good written and oral communication skills. The person hired will be expected to develop a vigorous, extramurally funded research program and to participate in graduate and undergraduate teaching, including cell biology. Salary, space, start-up funds, and facilities are competitive, and the program is well-equipped with modern instrumentation. Review of applications will begin on October 18, 2000, and continue until the position is filled. Applicants should forward complete curriculum vitae and research prospectus and arrange to have three letters of recommendation sent to: Dr. Gerald M. Carlson, Head, Division of Molecular Biology and Biochemistry, School of Biological Sciences, University of Missouri-Kansas City, 5100 Rockhill Road, Kansas City, MO 64110-2499. An Affirmative Action/Equal Opportunity Employer.

Oberlin College: The Department of Chemistry invites applications for an open-rank, tenure-track FACULTY POSITION in biochemistry or physical chemistry beginning fall 2001. Applicants should have a Ph.D. in biochemistry or physical chemistry. The appointee will teach a course in her/his specialty, general chemistry, a nonmajors course, and be expected to establish a vigorous undergraduate research program, preferably in a biologically related area. Oberlin College is the undergraduate origin of more Ph.D.s than any other liberal arts college. See the Departmental website: www.oberlin.edu/chem for additional information. Applicants should submit curriculum vitae, academic transcripts, a description of their proposed research program, and arrange to have three letters of recommendation sent to: Michael W. Nee, Chair, Chemistry Department, Oberlin College, Oberlin, OH 44074. Review of applications will begin October 25, 2000, and continue until the position is filled. Oberlin College is an Affirmative Action/Equal Opportunity Employer.

San Francisco State University: DEAN OF THE COLLEGE OF SCIENCE AND ENGINEER-ING. Nominations and applications are invited for the position of Dean of Science and Engineering. For a complete position description and application procedures, visit the California State University Employment website: www.sfsu.edu/~hrwww/jobs/careerop.htm or contact: Office of the Provost at San Francisco State University; Telephone: 415-338-1141.



Cell Genesys is committed to the development and commercialization of cancer vaccines and genetic therapies to treat major life-threatening diseases. We are seeking creative individuals with innovative ideas who want to make a difference in the following areas:

Director, Molecular Virology

Requires a PhD and postdoctoral fellowship in Virology or Transcription/ Translation regulation with 5+ years experience. Must have independently directed research projects in academic or industrial setting and supervised scientist-level employees. Job Code: SM022

Senior Scientist, Preclinical Oncology

Requires PhD in Biological Sciences or relevant MD degree, 3-4 years postdoctoral fellowship in cancer biology, and 4+ years directing a research lab in academic or industrial setting. Supervisory experience with technicians and scientists and an extensive background in animal cancer modeling are required. Job Code: SM066

Scientist, Molecular Virology

Requires a PhD in Virology and 2+ years postdoctoral experience to lead research/development of advanced viral vectors. Experience with generation and analysis of mutants, PCR, DNA/RNA analytical techniques, and retrovirus/lentivirus growth and analysis is required. Job Code: SM150

Scientist, Molecular Virology

Requires a PhD or MS in Molecular Biology or Virology with 2-5 years molecular biology and viral gene delivery experience to lead development/characterization of gene transfer/gene expression vectors. Experience in plasmid cloning, large-scale plasmid preparation and Southerns and Northerns required. Job Code: SM151

Development Scientist I

Requires a PhD or MS in Biological Sciences or Biochemical Engineering and 3+ years of cell culture fermentation and cell line development (for PhD) or 10 years (for MS). Knowledge of medium and fermentation optimization is required to work with cell culture process development for Cell Genesys clinical products. Job Code: SM082

Cell Genesys is growing rapidly and has opportunities for Research Associates, SRAs and Associate Scientists, and in Assay Development, Process Development, QC/QA, Validation, Manufacturing, Regulatory Affairs and Clinical Research.

For more information on these and other job opportunities, please visit our website at **www.cellgenesys.com**

Please forward your resume/written inquiries, indicating Job Code, to: Cell Genesys, Inc., Attention: Human Resources, 342 Lakeside Drive, Foster City, CA 94404. Fax (650) 349-4785. Or e-mail your resume to HR@cellgenesys.com. EOE.



CELL GENESYS

NIH/National Cancer Institute Division of Cancer Prevention Cancer Biomarkers Research Group (http://dcp.nci.nih.gov/cbrg)

The Cancer Biomarkers Research Group of the National Cancer Institute is currently recruiting scientists/medical officers to serve as program directors responsible for administering, managing and developing national and international research programs in the identification of early cancer and cancer risk. Specific requirements of the positions are described below:

Health Science Administrator/Biologist/Molecular Biologist/Medical Officer: The position requires knowledge of and advanced training (Ph.D. or M.D.) in the molecular and genetic basis of human cancers and its implication for risk identification and detection of early cancer. Experience with managing and directing relevant laboratory research or extramural programs is preferred. Applicants from academia should be of an assistant professor or above rank.

Computer Scientist/Bioinformatic Specialist:

Knowledge of complex biological databases, especially proteomic and genomic databases relevant to gene discovery, modeling, and risk assessment is required. Ability to lead design, specification, and implementation of biomarker databases in distributed, heterogeneous environment and knowledge of interfaces, portals, and other Web-based applications is a plus. The position requires an advanced degree (Ph.D.) or knowledge of computer science principles and practices in informatics, especially bioinformatics or medical informatics, and of computational algorithms in analyzing DNA, RNA, and proteins expression data.

Medical Officer: Applicants must have laboratory experience and relevant training in anatomic and molecular pathology, FISH, immunohistochemistry, and tissue array. Applicants should also have familiarity with the following technologies: clinical diagnostic pathology, medical informatic systems, virtual imaging, virtual telepathology, and the principles and practices of molecular pathology. Applicants must have an M.D. and be board eligible or board certified in pathology or oncology.

The salary range for these positions is \$60,890 to \$96,769 and is commensurate with education and experience. Physician's Comparability Allowance up to an additional \$30,000 may be available.

Interested candidates should send their resume or curriculum vitae to: Dr. Sudhir Srivastava, NCI, 6130 Executive Boulevard, Executive Plaza North, Suite 330, Bethesda, MD 20852. Phone: 301-435-1594, Email: ss1a@nih.gov.

Commissioned Officers are welcome to submit their curriculum vitae or resume. Selections for these positions will be based solely on their merit, with no discrimination for non-merit reasons, such as race, color, gender, national origin, age, religion, sexual orientation or physical or mental disability.

NIH/NCI is an Equal Opportunity Employer.

FACULTY POSITION BIOLOGICAL OCEANOGRAPHY THE UNIVERSITY OF WASHINGTON

The School of Oceanography at the University of Washington invites applications for a faculty position in biological oceanography. Appointment is anticipated at the ASSISTANT PROFESSOR rank, but candidates with exceptional qualifications may be considered for appointment at the rank of ASSOCIATE PROFESSOR or PROFESSOR. We seek a person whose research integrates biochemical, physiological, and/or molecular approaches to understand the distribution and abundance of functional groups of phytoplankton important to oceanic biogeochemical processes. Ph.D. degree is required by the date of appointment. Candidate will be expected to teach at the undergraduate and graduate levels. Informal requests for further information can be directed to Dr. Bruce Frost at the following e-mail address: frost@ocean. washington.edu. Applicants should send curriculum vitae, a statement of research and teaching interests, a list of publications, recent reprints, and the names of four references to: Professor Bruce W. Frost, Director, University of Washington, School of Ocean-ography, Box 357940, Seattle, WA 98195. Priority will be given to applications received before 8 November 2000. The University of Washington is an Equal Opportunity/Affirmative Action Employer. The University of Washington is building a culturally diverse faculty and strongly encourages applications from women and minority candidates.

BIOCHEMISTRY FACULTY POSITIONS UNIVERSITY OF COLORADO, BOULDER

The Department of Chemistry and Biochemistry invites applications for two tenure-track faculty positions in the Biochemistry Division, one at the AS-SISTANT PROFESSOR level; candidates at all levels will be considered for the second position. Candidates must have a Ph.D. degree and enthusiasm for teaching chemistry or biochemistry at undergraduate and graduate levels and will be expected to develop an innovative research program in biochemistry. All areas of research will be considered, although one position is specifically targeted for macromolecular X-ray crystallography.

Applicants should submit curriculum vitae and statement of research interests and arrange to have three letters of reference sent to: Mable Stewart, Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Colorado, Boulder, CO 80309-0215. For full consideration, applications should be received by November 20, 2000, although all applications will be reviewed until the positions are filled. The University of Colorado at Boulder is committed to diversity and Equality in Education and Employment.

ASSISTANT PROFESSOR DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS Harvard Medical School

The Department of Microbiology and Molecular Genetics invites applications for a tenure-track position at the Assistant Professor level. The Department is interested in candidates from all areas of virology including virus structure, virus-cell interactions, viral pathogenesis, virus-host interactions, and viral immunology. Outstanding candidates conducting research in other areas of microbiology will also be considered. The successful candidate will also participate in teaching graduate and medical students. Applicants should possess a Ph.D. or M.D. degree and have at least two years of postdoctoral training. Applicants should send curriculum vitae; copies of publications; a brief summary of research interests; and the names, e-mail addresses, and mailing addresses of four references to: Dr. David Knipe, Search Committee Chair, Department of Microbiology and Molecular Genetics, Harvard Medical School, 200 Longwood Avenue, Boston, MA 02115. Harvard Medical School is an Equal Opportunity/Affirmative Action Employer. Women and underrepresented minorities are strongly encouraged to apply.

POSITIONS OPEN

BIOLOGY FACULTY POSITIONS SAN DIEGO STATE UNIVERSITY

Two tenure-track appointments at the ASSIST-ANT PROFESSOR level are offered in the Biology Department to begin fall 2001. Ph.D. required and postdoctoral experience preferred. Successful applicants will be expected to establish externally funded research programs involving B.S., M.S., and Ph.D. students.

(1) Computational biology/bioinformatics. Applicants should have a demonstrated competence in the application of computational methods to molecular and cell biology with research interests in genomics, proteomics, molecular modeling, or related areas. Substantial training in mathematics, statistics, or computer science is desirable. Teaching involvement will include a course in computational biology and development of a program in bioinformatics.

(2) Marine Animal Ecologist. Research addressing physiological and population or community ecology of invertebrates or fishes required. Interests might include effects of pollutants or other stressors on animals, animal-microbe or animal-plant interactions (trophic and nontrophic), and trophic dynamics including predator-prey relationships. Consideration will include the candidate's match to our programmatic strengths in research emphases (coastal marine ecology, ecosystem/global change, conservation/restoration ecology); in teaching innovation and quality; and in student mentoring. Expectations include interaction with a diverse student body and 13 full-time ecology faculty members. Teaching responsibilities to include a course in marine ecology, participation in undergraduate general ecology and marine-related courses, and supervision of graduate students.

More information on both positions is available at website: http://www.bio.sdsu.edu/fac-recruitment. Review of applications begins November 1, 2000, and will continue until the positions are filled. Applicants for either position should send curriculum vitae, statement of research and teaching interests, three representative publications, and three letters of recommendation to: Developmental Biology Search Committee, or Marine Animal Ecology Search Committee, Department of Biology, San Diego State University, San Diego, CA 92182-4614. San Diego State University is an Equal Opportunity Employer and does not discriminate against persons on the basis of race, religion, national origin, sexual orientation, gender, marital status, age, or disability. Women, ethnic minorities, and persons with disabilities are encouraged to apply.

TENURE-TRACK POSITION LABORATORY OF CELLULAR AND MOLECULAR BIOLOGY

The Laboratory of Cellular and Molecular Biology (LCMB), Division of Basic Sciences, of the National Cancer Institute, National Institutes of Health (website: http://rex.nci.nih.gov/RESEARCH/basic/ lcmb/labcellbio.htm), has a long tradition of excellence in the investigation of signal transduction pathways involved in both normal cellular function and malignant transformation. The Laboratory now invites applications for a tenure-track position to study the cell biology of signal transduction. The applicant should have the potential to develop an independent basic research program in cellular and molecular biology with emphasis on understanding basic signal transduction processes. This position is available for a Ph.D., M.D., or M.D./Ph.D. with a salary commensurate with education and experience. A one- or twopage statement of research interests and goals should be submitted in addition to three letters of recommendation and curriculum vitae to: Ms. Michelle Porturica, Executive Secretary, Laboratory of Cellular and Molecular Biology, DBS, NCI, Building 41, Room A101, Bethesda, MD 20892-5055. Telephone: 301-435-2515; FAX: 301-435-2779; email: Porturim@exchange.nih.gov. Candidates must be U.S. citizens or permanent residents. NIH tenure-track Investigators with educational debts may be eligible for NIH Loan Repayment Program. Applications to be postmarked by November 17, 2000. The NCI is an Equal Opportunity Employer.

POSITIONS OPEN

BIOLOGICAL PHYSICS TENURE-TRACK ASSISTANT PROFESSOR Department of Physics and Astronomy Vanderbilt University

Applications and nominations are invited for a tenure-track Assistant Professor position in any subfield of biological physics or in areas which bridge condensed matter and biological physics. An exceptionally qualified person at a more senior level will be considered. The successful candidate will be expected to establish a leading, independent research group and to be highly effective in teaching at the undergraduate and graduate levels. Biophysical research areas within the Department include bioelectric and biomagnetic phenomena; nonlinear dynamics of molecular and cellular systems; fluctuation dynamics of biopolymers and proteins; molecular motors and micromanipulation; interactions of IR, visible, and UV lasers with biological systems; bioinformatics; and applications of tunable, monochromatic X-rays to medical imaging and biological physics. Candidates can take advantage of the unique opportunities for inter-disciplinary research at the W.M. Keck Free Electron Laser Center and collaborations with the Schools of Engineering and Medicine, as well as other projects in the Trans-University Initiative in Biomedical Science and Technology

Applications, including a résumé and the names and addresses of three references, should be sent to:

Thomas W. Kephart
Chair, Biological Physics Search Committee
Vanderbilt University
VU Station B351807
Nashville, TN 37235-1807
FAX: 615-343-7263

E-mail: kephartt@ctrvax.vanderbilt.edu

Review of applications will begin immediately and will continue until the position is filled. The starting date may be as early as I January 2001. Vanderbilt University is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are particularly encouraged to apply.

ALL AREAS OF CHEMISTRY NORTHWESTERN UNIVERSITY

We invite applications for three tenure-track faculty positions at the ASSISTANT PROFESSOR level. Duties include teaching undergraduate and graduate students as well as maintaining a vigorous independent research program. Excellence in any area of chemistry (including physical, analytical, inorganic, or organic) is the primary criterion. However, individuals interested in conducting interdisciplinary research (e.g., chemistry of life processes, materials chemistry, or environmental chemistry) are particularly encouraged to apply. Please send curriculum vitae, publication list, and description of future research plans, and arrange for three letters of recommendation to be sent to: Search Committee, Department of Chemistry, Northwestern University, Evanston, IL 60208-3133 by October 31, 2000. Equal Employment Opportunity/Affirmative Action Employer. Applications from women and underrepresented minority candidates are especially welcome.

The Biology Department, Macalester College, invites applications for a tenure-track ASSISTANT PROFESSOR in plant biology beginning September 1, 2001. The successful applicant will teach genetics or cell biology, plant biology/physiology, and a research course. She/he will be strongly committed to teaching undergraduates in a liberal arts setting and will be expected to establish an active research program involving undergraduates. Send curriculum vitae, a statement of research goals and teaching philosophy, and three letters of reference by November 2, 2000, to: Dr. Lin Aanonsen, Chair, Department of Biology, Macalester College, 1600 Grand Avenue, St. Paul, MN 55105-1899. Website: www. macalester.edu/~biology. The college does not discriminate in employment because of race, religion, creed, sex, national or ethnic origin, age, marital status, sexual orientation, or disability. Women and minorities are encouraged to apply.

Three Multidisciplinary Modeler Positions

The new Center for Observations, Modeling and Prediction at Scripps Institution of Oceanography (COMPAS) seeks 3 Research Scientists in the field of small-scale and coastal modeling, improvements of large-scale ocean models and coupled ocean-climate interactions to provide linkages across ocean and atmospheric modeling efforts ongoing and to be developed at SIO.

Applicants with all levels of experience are sought, but candidates with exceptional track records of expertise and leadership in numerical modeling are preferred. Examples of possible fields of interest include (but are not limited to) air-sea interaction, non-linear dynamics, ocean, atmosphere, and coupled modeling, climate forecasting, and understanding of small-scale and coastal processes. including mixing, internal and surface wave breaking, bottom boundary layers, etc. The time scales of interest include rapid coastal processes, studies of current state of the ocean, as well as forecasts of future large-scale changes on annual, decadal, centennial time scales. This search emphasizes experts in the physical aspects of the ocean, atmosphere and coupled climate system. Candidates who can also develop collaborations and complementary studies of benefit to understanding biological and geochemical interactions are encouraged to apply.

Requirements are a Ph.D. or equivalent and the ability to conduct independent research. The successful candidate will be expected to develop extramurally funded research programs. For the first three years of the appointment, the institution will provide 50% of the salary for this position. Support in the subsequent years will be according to SIO regulations. The research appointments parallel University of California faculty appointments, but are without formal teaching requirements. In this career track position, SIO will provide base salary support of 25% for the Associate Research rank and 50% upon promotion to Full Research as a supplement to extramural support obtained by the candidate, subject to the availability of institutional funds. Rank and salary are commensurate with experience and based on the University of California salary scales.

Closing date is November 15, 2000 or until filled. Interested candidates should send a cover letter, curriculum vitae, a list of five references, immigration status and a brief statement of research interest to:

Professor Detlef Stammer
Scripps Institution of Oceanography - Mail Code 0230
University of California, San Diego
9500 Gilman Drive
La Jolla, CA 92093-0230



Scripps Institution of Oceanography University of California, San Diego

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

Share the Vision

It's a vision of hope and of bettering the world. At each of our facilities, we're working to make this vision a reality. And, as part of American Home Products, one of the world's leading research-based companies, we deliver. If you're interested in a career using your pharmaceutical and scientific knowledge to help us help the world, join us in our **RADNOR**, **PA** facility.

The Women's Health Research Institute, a division of Wyeth-Ayerst Laboratories, is dedicated to the discovery and development of novel therapeutics in the areas of menopausal conditions, contraception, and reproductive disorders. Over 100 scientists participate in drug discovery and exploratory teams and regularly present their work at national meetings and in peer reviewed scientific journals.

PH.D. NEUROSCIENTIST

Recent data suggest that estrogen and progesterone may have therapeutic potential in neurodegenerative and neuropsychiatric disorders. You will be responsible for assessing the role of these hormones in one or more of these disorders and advancing the program to the drug development stage. A strong background in the neurosciences, a proven ability to establish CNS model systems related to neurological diseases, a track record for independent thinking, and good communication skills are essential. Level of responsibility will be commensurate with your experience (ideally 5 + years). This is an exceptional opportunity to make an impact on human health and further develop your pharmaceutical and scientific career in a challenging and interactive environment.

PH.D.- CARDIOVASCULAR WOMEN'S HEALTH DISCOVERY

We seek a qualified Ph.D. to conduct in vitro/in vivo studies on vascular reactivity to further our understanding of endothelial function and cardiovascular disease. Candidates' expertise must cover in vivo models of vascular function as well as in vitro assessment, with a mechanistic/molecular focus on NOS production and activity, Ca + + channel activity, K + channel effects, and related specialty areas. An estrogen biology background would be desirable.

Wyeth-Ayerst offers competitive compensation and benefits programs including stock options, child-care subsidies, flex time, business casual Fridays, educational assistance and professional development programs. Please forward your resume with salary requirements to: Wyeth-Ayerst, Reference OPSCI, P.O. Box 7886, Philadelphia, PA 19101-7886. Fax in fine mode to: (610) 989-4854. E-mail: jobs@RAMAIL1.wyeth.com (ASCII format, no attachments, subject: resume).

Principals only. Equal Opportunity Employer. M/F/D/V. For more information, visit us at: www.wyethjobs.com



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ENDOWED CHAIR: EVOLUTION OR ECOLOGY. The Department of Ecology and Evolutionary Biology at Rice University (website: http://dacnet.rice.edu/depts/eeb/) solicits nominations and applications for an Endowed Chair in any area of evolution or ecology. The person filling this position will also serve as Department Chair. We are seeking an intellectual leader with an innovative and outstanding research program who will benefit from being in a first-rate, very collegial growing department dedicated to creative research and teaching.

Rice is a private research university with a strong commitment to the highest standards of education at the graduate and undergraduate levels. Applicants should submit curriculum vitae, statement of research interests, selected reprints, and the names of three references to: Joan Strassmann, Endowed Chair Search Committee Chair, Department of Ecology and Evolutionary Biology, MS 170, Rice University, P.O. Box 1892, Houston, TX 77251-1892. E-mail: strassm@rice.edu. Review of applications will begin 25 October 2000 and continue until the position is filled.

Rice University is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are particularly encouraged to apply.

MICROBIOLOGY/BIOLOGICAL SCIENCES

ASSISTANT PROFESSOR: new tenure-track position starting August 2001. Ph.D. required; broad training/experience in biology and undergraduate education in the liberal arts. Teaching responsibilities (two courses per semester) will include general biology, general and medical microbiology for majors, and specialty courses for majors and M.S. candidates. Interest in environmental sciences. Strong commitment to undergraduate teaching and research. Send statement of teaching and research interests, curriculum vitae, transcripts, and three letters of reference to: Dr. Paul A. Richmond, Chair, Department of Biological Sciences, University of the Pacific, Stockton, CA 95211. Visit us at website: http://www. uop.edu. Review will begin November 6, 2000. The University of the Pacific is an Affirmative Action/Equal Opportunity Employer encouraging excellence through diversity.

COGNITIVE NEUROSCIENCE

The Department of Psychology at University of Wisconsin-Milwaukee anticipates a tenure-track opening in cognitive neuroscience at the ASSISTANT PROFESSOR level for the fall of 2001. Candidates should have a Ph.D., a strong background in experimental psychology and neuroscience, and significant postdoctoral research experience. Area of research specialization is open, but outstanding individuals with interests in memory, emotion, and human brain imaging are particularly encouraged to apply. Send curriculum vitae, a brief statement of research interests, and three letters of recommendation before January 15, 2001, to: Cognitive Neuroscience Search Committee, Department of Psychology, University of Wisconsin-Milwauke, P.O. Box 413, Milwaukee, WI 53201. University of Wisconsin-Milwaukee is an Affirmative Action/Equal Opportunity Employer.

Microbial evolution: The Department of Environmental, Population, and Organismic Biology at the University of Colorado at Boulder invites applications for an ASSISTANT PROFESSOR position. We seek an Evolutionary Biologist whose research focuses on bacteria, archaea, basal eukaryotes, or fungi. The successful candidate will be expected to develop a rigorous, externally funded research program and to teach introductory microbiology and an upper-level course in his/her field of expertise. Interested candidates should submit curriculum vitae; brief research and teaching statements; and the names, addresses, and e-mail addresses of three potential references to: Search Committee Chair, Department of EPO Biology, Campus Box 334, University of Colorado, Boulder, CO 80309. Applications must be received by November 6, 2000. The University of Colorado is committed to diversity and Equality in Education and Employment.

POSITIONS OPEN



ASSISTANT PROFESSOR (TWO) DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR PATHOLOGY

A tenure-track position requires the teaching of medical pharmacology to second-year medical students. A nontenure-track position involves teaching biochemistry to first-year medical students. Successful applicants will have a Ph.D., M.D., or equivalent degree. Candidates for either position will have demonstrated potential to attract extramural funding and will be expected to conduct research complementary to existing Departmental strengths in lipid metabolism and cardiovascular biochemistry. The College of Medicine is a member of a consortium composed of the University of Akron, Kent State University, and Youngstown State University. Departmental faculty are members of the graduate faculty in programs leading to the Ph.D. through the School of Biomedical Sciences at Kent State University, Further information about the Department and institution can be obtained from the NEOUCOM website: http:// www.neoucom.edu.

Applications will be accepted until November 10, 2000. In response to this announcement, identify the position being applied for and send curriculum vitae, statement of research interests, and a brief research plan, teaching experience, and three letters of reference to: William J. Landis, Ph.D., Professor and Chair, Department of Biochemistry and Molecular Pathology, Northeastern Ohio Universities College of Medicine, 4209 State Route 44, P.O. Box 95, Rootstown, OH 44272-0095. NEOUCOM is an Equal Employment Opportunity/Affinnative Action Educator and Employer.

NEUROBIOLOGY

A TENURE-TRACK POSITION will begin August 2001. We seek an individual with a strong commitment to liberal arts education, demonstrated excellence in teaching, and the ability to develop an active research program that involves undergraduates. The successful applicant will participate in an interdisciplinary neuroscience program funded by the Howard Hughes Medical Institute. Teaching duties include a core course for neuroscience majors, a teamtaught introductory biology course focused on genetics and development, an upper-level course in the candidate's area of expertise, and participation in collegewide freshman-sophomore seminars that emphasize writing and speaking. Excellent research and technical facilities are available, as are start-up funds. Send curriculum vitae, statements of teaching and research interests, and three letters of recommendation to: Dr. Scott Wissinger, Department of Biology, Allegheny College, Meadville, PA 16335. Review of applications will begin on October 30, 2000. For more information, see website: http://webpub. allegheny.edu/employee/l/lcoates/Neuropage/ neuropage.html. Women and minorities are strongly encouraged to apply.

BIOINFORMATICS ASSOCIATE

Weill Medical College of Cornell University in Manhattan, New York, seeks a Bioinformatics Specialist to help staff the Microarray Core and the Computational Core. The recruit will help faculty in performance of microarray experiments, analysis of microarray data, sequence- and structure-based homology and functional analyses, gene identification, and other genomic analyses. Appointment at the RESEARCH ASSOCIATE or FACULTY level will be commensurate with background and experience. Send letter, curriculum vitae, and three letters of recommendation to: Bernadette M. Mosellie (Bioinformatics), Box Number 27, Weill Medical College of Cornell University, 1300 York Avenue, New York, NY 10021. Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.

POSITIONS OPEN

Two BIOLOGY POSITIONS. Birmingham-Southern College, a selective national liberal arts college, has openings for two tenure-track ASSISTANT PRÓFESSORS who are committed to liberal arts education, to excellence in teaching, and to developing active research programs involving undergraduates. Ph.D. required; postdoctoral experience desirable. Vertebrate biology: Teaching responsibilities include introductory population/ecosystem biology, organismal biology, and a vertebrate field biology course. Eukaryotic molecular genetics: Teaching responsibilities include the required upper-level genetics course, introductory cell and molecular biology, and advanced cell biology or biochemistry. The teaching load is 12 contact hours per week, with lecture and laboratory considered equally. Start-up funds available. Construction of the Elton Bryson Stephens Science Center is underway. Review of candidates will begin 15 December 2000. For further information, see website: http://panther.bsc.edu/~lpezzeme/ biology_html/posts.html. Submit a letter of application, curriculum vitae, statement of teaching philosophy and research interests, recent publications, three letters of recommendation, and undergraduate and graduate transcripts to: Leo Pezzementi, Chair, Division of Science and Mathematics, Box 549022, Birmingham-Southern College, Birmingham, AL 35254. E-mail: lpezzeme@sc.edu. Birmingham-Southern College complies with the Alabama Child Protection Act. Equal Opportunity Employer.

The Department of Zoology and Physiology at the University of Wyoming invites applications for a tenure-track position at the ASSISTANT PROFES-SOR level. We are seeking a Comparative Endocrinologist with an integrative approach, with research interests that can range from the molecular/cellular to system levels. The candidate should have a strong record of research productivity and the demonstrated capacity to develop a vigorous, extramurally funded research program that will augment our graduate physiology program. Teaching responsibilities in-clude the development of an undergraduate and graduate course in their area of interest and advising physiology students. Participation in our team-taught graduate course in advanced comparative physiology as well as interdepartmental reproductive physiology and neuroscience programs will be encouraged. The candidate will have a Ph.D.; postdoctoral experience is desirable. An application including a statement of research and teaching interests, curriculum vitae, and contact information (mailing address, telephone number, e-mail address) for three references should be sent to: Dr. Nick Fuzessery, Chair, Physiology Search Committee, Department of Zoology and Physiology, University of Wyoming, Laramie, WY 82071-3944. Review of applications will begin on November 15, 2000; the starting date is fall 2001. The University of Wyoming is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS

The Boston Biomedical Research Institute, an independent nonprofit research institute (website: http://www.bbri.org), invites applications for two JUNIOR or SENIOR RESEARCH FACULTY positions from Scientists with postdoctoral experience and significant research accomplishments. The successful candidates will complement the research of other investigators at the Institute with interests in various aspects of contractility, signal transduction, and regulation of cell growth and will establish independent, externally funded research programs. Generous start-up packages are available. In February 2000 the Institute relocated to a new state-of-the-art research facility in Watertown, Massachusetts, an attractive 60,000-square foot building less than two miles from Harvard Square in Cambridge. Applicants should submit by mail curriculum vitae and a brief statement of research plans and arrange to have letters from three references sent to: Chairman, Search Committee, Boston Biomedical Research Institute, 64 Grove Street, Watertown, MA 02472. Screening of applications will begin on November 1, 2000, and will continue until the positions are filled.

Director Transgenic Mouse Facility

The University at Albany, SUNY seeks an experienced PhD/MS to direct the University's Transgenic Facility. This facility is part of the University's newly established Center for Comparative Functional Genomics and is a joint venture of the University, Albany Medical College, and Taconic Farms, Inc. The Director will work closely with staff from both the Center and Taconic Farms and will be an integral part of our NIH funded Mutant Mouse Resource Center. Expertise in microinjection essential; experience in ES Cell Culture preferred. The University offers competitive salary and benefits packages.

Please direct responses to:
Dr. Paulette McCormick
Center for Comparative Functional
Genomics
Department of Biological Sciences
University at Albany, SUNY
1400 Washington Avenue
Albany, NY 12222

Please include a CV and three letters of reference or the names and e-mail addresses of three references. Closing date for applications is 10/29/00.

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

The University of Texas Health Science Center at Houston School of Public Health Faculty Positions in Environmental Sciences MPH Program at Brownsville



The University of Texas Health Science Center at Houston School of Public Health is seeking 2 qualified applicants at the Assistant, Associate, or Full Professor level for tenure-track positions in environmental sciences or a related field for its new satellite Master of Public Health program in Brownsville. TX.

Responsibilities will be to teach, perform community service, and develop funded research efforts that generate publications in the professional literature. General qualifications include: (1) strong interest in teaching and advising graduate students, (2) demonstrated ability to support an active research program in one or more environmental health specialties, (3) strong interest in collaborative research, and (4) excellence in written and oral communication skills. Spanish fluency, and previous border health experience or employment, are desirable.

Ideal candidates would have a solid foundation in the academic principles of public health and familiarity with public health practice. The candidate's research interests should include environmental factors affecting human health in multicultural communities along the Texas-Mexico border. A doctoral degree in environmental sciences or a related discipline is required. Graduate-level academic training in public health is desirable.

The Brownsville satellite program, a component of the new Lower Rio Grande Regional Academic Health Center and an integral part of the UT Health Science Center at Houston School of Public Health, will be located in a new, 26,000 square foot School of Public Health building on the University of Texas - Brownsville/Texas Southmost College campus. The School of Public Health also has satellite MPH programs in San Antonio, El Paso, and Dallas with a core group of resident faculty at each location. Faculty at the new campus in Brownsville will have the opportunity to collaborate with faculty and public health professionals on both sides of the border and with the faculty in Houston and the other satellite campuses.

Review of applications is underway and will continue until the positions are filled. Rank will be determined by qualifications and background of successful applicants. Candidates should send a letter describing their qualifications and interests along with their curriculum vitae as attachments to gschroder@sph.uth.tmc.edu.

Additional information about the UT-H SPH Division of the Lower Rio Grande Regional Academic Heath Center can be found at http://www.sph.uth.tmc.edu/.

The University of Texas is an Equal Opportunity, Affirmative Action Employer. Minorities and women are strongly encouraged to apply.

SEARCH

Felonils(s

Alexion Pharmaceuticals, Inc. is a publicly traded, growing biopharmaceutical company engaged in the development of novel drugs for the treatment of immunological and cardiovascular diseases. We are seeking energetic professionals for open positions in our Process Development Department. Protein scientists at the BS/MS level will work with a talented group of scientists on protein characterization and improvement of protein purification processes suitable for scale-up and technology transfer to manufacturing. Positions are available in the following areas:

- Development/improvement of protein folding methods, assay development for protein characterization, and development of protein purification process schemes from cells through formulation of pure protein therapeutics.
- Bioanalytical characterization of our protein therapeutics, their folding intermediates, modifications, and breakdown products by techniques such as HPLC, peptide mapping, SEC, CD and fluorescence spectroscopies.

The above positions will involve complete protein purity analyses including electrophoresis and Western blotting. The candidate(s) should have a working knowledge of proteins, electrophoresis, chromatography, HPLC, or Western blot analyses.

■ An additional position is open for candidates with significant postgraduate (BS/MS), preferably industrial, experience with Mass Spectrometry. Responsibilities include the operation and maintenance of a state-of-the-art LC/MS system. Working knowledge of separation science and biophysical chemistry is required.

Alexion offers competitive compensation; full benefits including health insurance, 401(k) plan, incentive stock options, and relocation assistance. For consideration, please send your resume including references to:



Human Resources, Dept. Code #PD Alexion Pharmaceuticals, Inc. 25 Science Park, Suite 360 New Haven, CT 06511 Email: huzare@atxn.com

www.alxn.com

Equal Opportunity Employe

MODELING OF BIOLOGICAL SYSTEMS

AN INTERDISCIPLINARY COURSE FOR BIOLOGISTS AND NON-BIOLOGISTS

MARCH 24 - MAY 3, 2001

Modeling of Biological Systems (MOBS) is an intensive, multi-disciplinary, residential lecture & laboratory course designed to train biologists and non-biologists to apply and adapt successful modeling approaches in biology to their own research. MOBS is for students in the biological, chemical and physical sciences, mathematics and engineering. The course is organized into thematic cassettes that focus on particular broad areas of biology.

The MOBS curriculum is geared to advanced graduate students and above. Students will require at least a working knowledge of calculus. Successful applicants will receive pre-course assignments to help with their course activities. The course represents an innovative approach to education of modeling of biological systems in its thematic organization, modularity of content, interdisciplinary teaming, and multi-year involvement by both students and faculty.

The faculty will introduce students to successful approaches to modeling used to address contemporary biological questions in a quantitative fashion. With faculty tutelage, students will have hands-on opportunity to work with these models and to learn to apply these approaches to their own scientific questions.

Additional information is available at http://courses.mbl.edu.

The Burroughs Wellcome Fund and the National Science Foundation provide funding support for the MOBS Course.

Course Director: Robert B. Silver, Marine Biological Laboratory

Faculty: Thomas E. Cheatham III, Univ. of Utah; Robert Eisenberg, Rush University; Judith Herzfield, Brandeis University; John R. Hummel, Argonne National Laboratory; Peter A. Kollman, UCSF; John E. Pearson, Los Alamos National Laboratory; Silvina Ponce-Dawson, Univ. of Buenos Aires; Gregory Petsko, Brandeis University; and others to be announced.

Application Deadline: December 29, 2000.

Course Fee: \$3,750 (room & board is additional). Scholarship assistance is available.



For More Information or Application Contact: Admissions Coordinator, Marine Biological Laboratory 7 MBL Street, Woods Hole, MA 02543 (508) 289-7401 / email: admissions@mbl.edu

The MBL is an EEO Affirmative Action Institution

BIOLOGISTS: Monmouth College, a nationally ranked liberal arts college in western Illinois, seeks applications from broadly trained Biologists to fill two tenure-track ASSISTANT PROFESSOR positions in biology (plant biology and molecular genetics) to begin fall 2001. Both positions require a Ph.D. (ABD considered) and a strong commitment to undergraduate teaching in a liberal arts setting. Combined teaching responsibilities of the two positions are botany, cell biology, genetics, field botany, molecular biology, and microbiology. Additional responsibilities include teaching life on Earth (biology for nonmajors) and developing advanced courses in specialty. Participation in interdisciplinary general education courses and supervision of undergraduate research projects are expected.

Plant Biologist: Ph.D. (or ABD) in plant biology, botany, or related field required. Preference given to candidates specializing at the physiological/organismal scale of study. However, the flexibility to teach at higher or lower scales of biological organization will be considered advantageous.

Molecular Geneticist: Ph.D. (or ABD) in molecular biology or related field required. Preference given to candidates specializing in any area of molecular genet-

ics. Breadth of knowledge of a range of genetic systems (e.g., eukaryotes and prokaryotes, plants and animals) is advantageous.

Send letter of application, curriculum vitae, teaching philosophy, and a list of at least three professional references with telephone numbers to: Michael McNall, Director of Personnel, Monmouth College, 700 East Broadway, Monmouth, IL 61462. Please do not send letters of recommendation unless requested. Formal review of applications will begin November 10, 2000, and continue until the position is filled. Applications received by this date will be given full consideration. Monmouth College, an Equal Opportunity Employer, is committed to diversity and encourages applications from women and minority candidates.

DIRECTOR INSTITUTIONAL TRANSGENIC FACILITY

The School of Medicine at Case Western Reserve University invites applications for a Director for the Institutional Transgenic Facility. The successful applicant will be responsible for developing a state-of-theart core transgenic facility that meets the needs of the University community. Specific responsibilities include but are not limited to oversight of technical personnel and management of the facility, consultation with primary investigators, production of transgenic mice, rederivations, development of sperm and embryo freezing methods, maintenance of appropriate mouse colonies, and equipment purchases.

A Ph.D. degree and one to two years of experience in embryo manipulation and pronuclear injections are required. Salary is competitive. Please send curriculum vitae and the names of three references by October 6, 2000, to: Anne Duli, Director, Research Office, School of Medicine, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4919. Case Western Reserve University is an Affirmative Action/Equal Opportunity Employer.

ECOLOGICAL ENGINEER

Tenure-track, 12-month (75% teaching, 25% research) **ASSISTANT PROFESSOR** in the Biological Resources Engineering Department. Responsibilities include teaching, research, and advising in the Natural Resources Management (NRMT) program and the Department's ecological engineering graduate program. Incumbent will develop a nationally recognized research program in ecological engineering and secure external funding support. A Ph.D. in ecology, ecological engineering, or closely related field is required with at least one degree in engineering. Applicants should submit a letter of interest, curriculum vitae, and names and addresses of at least three references to: Dr. Patrick Kangas, 1457 Animal Sciences Building, University of Maryland, College Park, MD 20742-2315. Closing date is October 31, 2000, or until acceptable candidate is found. The University of Maryland is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

FACULTY POSITIONS IN BIOLOGY

Hope College seeks applicants for two positions (pending final approval) to begin August 2001. The successful candidates for each of these positions will have a Ph.D., with postdoctoral experience preferred. (1) A broadly trained Organismal Botanist for a tenure-track position at the ASSISTANT PROFES-SOR level. This individual will be expected to develop a vigorous, externally funded research program with active participation by undergraduate students. We seek someone who addresses questions of fundamental significance at the organismal level (e.g., plant physiology, ecophysiology, aquatic physiology). Additionally, the proximity of Lake Michigan to Hope College is ideal for the study of aquatic organisms. She/he will also participate in introductory courses at the organismal level and teach junior/senior level courses in botany. (2) a Microbiologist at the AS-SISTANT PROFESSOR level for a three-year-term position. This person will annually teach lecture and laboratory sessions of both a majors level microbiology course and a health professions microbiology course in addition to participating in an introductory biology course. Collaborative research/scholarly activity with Hope faculty in the summer is highly encouraged. Hope College is a distinguished liberal arts college with an enrollment of 3,000 students and a faculty of more than 250. The College has a strong tradition of teaching through research in the sciences. The Department of Biology has 14 faculty members and has enjoyed 14 consecutive years of funding for undergraduate research from the National Science Foundation. Additional information about the Biology Department at Hope College can be found at website: http://www.hope.edu/academic/biology. Hope College is affiliated with the Reformed Church of America. Qualified applicants should arrange to have curriculum vitae, copies of undergraduate and graduate transcripts, statements of research interests and teaching philosophy/competencies, and three letters of recommendation sent to: Dr. Dan Gerbens, Department of Biology, Hope College, 35 East 12th Street, Holland, MI 49422-9000. Applications received by October 31, 2000, will be assured full consideration. Hope College complies with all legal requirements prohibiting discrimination in employment and actively seeks diversity in its applicant pool. Women and persons of color are strongly encouraged to apply. Hope College has a strong commitment to recruiting and sustaining an ethnically diverse student body and faculty. This is particularly important because we seek better to serve our students from groups traditionally underrepresented in the sciences.

The Department of Physiology, Louisiana State University Health Sciences Center, New Orleans, Louisiana, seeks outstanding candidates for a tenure-track position at the ASSISTANT PROFESSOR level. The successful candidate must have a Ph.D. or equivalent, postdoctoral research experience, and a strong record of research accomplishments. We are seeking individuals with expertise in the pathophysiology of inflammation, shock, trauma, or infection, but other areas of interest will be considered. Expertise in modern molecular biological techniques and experience in regulatory mechanisms important to disease processes are desired. The successful candidate will be expected to maintain an active, extramurally funded research program, to complement the existing research strengths of the Department, and to participate in the Department's teaching program. Excellent start-up package, competitive salary, state-of-the-art instrumentation, and opportunity to affiliate with existing Alcohol Research Center and Training Grant are available. By November 15, 2000, candidates should submit curriculum vitae, a brief statement of research interests and career goals, and have letters of reference sent from at least three individuals who know the work of the candidate to: Dr. I. R. Lancaster, Jr., Chair, Search Committee, Department of Physiology, Louisiana State University Health Sciences Center, 1901 Perdido Street, New Orleans, LA 70112. E-mail: jlanca@lsuhsc.edu. LSUHSC is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

MOLECULAR CELL BIOLOGIST

The Department of Biological Sciences seeks applicants at any level for a TENURE-TRACK POSI-TION in molecular aspects of cellular biology. The area of specialization is open, but candidates with a strong interest in the areas of cell-cell and cell-matrix interactions; the cell cycle; intracellular transport and targeting; and signal transduction at the cellular, organelle, or biochemical levels are particularly encouraged to apply. The successful candidate will be expected to establish an independent, externally funded research program and teach at the undergraduate and graduate levels. Applicants should submit curricula vitae, statements of current and future research and teaching interests, copies of three most relevant publications, and three letters of recommendation to: Dr. Richard Showman, Chair, Molecular Cell Biology Search Committee, Department of Biological Sciences, University of South Carolina, Columbia, SC 29208. Review of applications will begin November 15, 2000. Information on the Department can be found at website: http://www.biol.sc.edu. An Equal Opportunity/Affirmative Action Employer. Women and minority candidates are strongly encouraged to apply.

UNIVERSITY OF COLORADO AT BOULDER

Molecular, Cellular, and Developmental Biology

We seek an ASSISTANT PROFESSOR, tenuretrack Molecular Biologist, who studies the mechanism or control of transcription, DNA synthesis, DNA repair, recombination, chromatin structure, or genome stability beginning in the fall of 2001. Complete applications include curriculum vitae; publications; short summary of scientific interests; and three evaluative letters from knowledgeable scientific references, solicited by the applicant and sent directly to Boulder. Applications will be reviewed beginning 31 October 2000 and will be accepted until the position is filled. Send all materials to: Molecular Biology Search, MCD Biology, University of Colorado, Boulder, CO 80309-0347. The University of Colorado at Boulder is committed to diversity and Equality in Education and Employment. Applications from candidates who would strengthen the Department's diversity are especially encouraged.

TENURE-TRACK POSITION

The Molecular Oncology Program at the Fox Chase Cancer Center seeks outstanding applicants for a tenure-track FACULTY POSITION. Our focus is on candidates at the junior faculty level, but more senior applicants will also be considered. The main interests of our program are in the molecular origins of cancer, including but not limited to signal transduction; oncogenes and tumor suppressors; cell-matrix interactions; apoptosis; angiogenesis; cell cycle control; and DNA replication, repair, and stability. Applications should include curriculum vitae, bibliography, a brief description of future plans, and a list of three references. Applications should be sent to: Dr. A. M. Skalka, Molecular Oncology Search, Institute for Cancer Research, c/o Human Resources, 7701 Burholme Avenue, Philadelphia, PA 19111. Equal Opportunity Employer.

ASSISTANT PROFESSOR

Tenure-track position in animal diversity in the Department of Zoology, Ohio Wesleyan University (website: http://jobs.owu.edu), starting August 2001. Teaching responsibilities include introductory zoology and advanced courses in invertebrate zoology, marine biology, and conservation biology over a two-year cycle. A Ph.D., evidence of excellence in undergraduate teaching, and a commitment to undergraduate research are required. Applicants should mail a statement of teaching, and research interests, curriculum vitae, transcripts, up to five reprints, and arrange to have three letters of recommendation sent to: Dr. John Gatz, Department of Zoology, Ohio Wesleyan University, Delaware, OH 43015-2398 by November 3, 2000. Ohio Wesleyan University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.



Activx Biosciences is an emerging biotechnology company that is developing the first platform for activity-based proteomics to meet the challenges of the post-genomic era. Activx will apply its technology toward the discovery of novel biological targets in a number of diseases. Activx is seeking candidates n several areas

Synthetic/Organic Chemists

Senior Chemist with 7-12 yrs experience in medicinal chemistry in the pharmaceutical industry with a broad knowledge of drug design/small molecule synthesis and an intimate understanding of enzymology. Additional chemists with 5-7 yrs medicinal chemistry experience and possessing an extensive knowledge of small molecule design and synthesis, as well as a command of enzymology. Research Associates with a B.A. or M.S. in chemistry and experience in chemical synthesis.

Assay Development/High-Throughput Screening

Experienced scientist with a Ph.D. and at least 5-7 yrs experience in assay development and high-throughput screening and a broad knowledge of cell biology, enzymology and receptor biochemistry, to lead a team responsible for implementing an activity-based target discovery platform.

Mass Spectrometry

Experienced scientists with a Ph.D. and 3-5 yrs experience in the proteomics arena and an in-depth knowledge of theory and practice of all aspects of mass spectrometry (MALDI-TOF, ES, LC-MS).

Cellular Biochemists

Scientists with a Ph.D. and 3-5 yrs experience in cell biology or biochemistry and working knowledge of cellular biochemistry and genomics/proteomics.

Activx provides competitive compensation including salary, stock options and benefits. Please send or email your resume or curriculum vitae to: Kathy Rooney (kathyr@activx.com), Activx Biosciences, Inc., 11025 N. Torrey Pines Road, Suite 120, La Jolla, CA 92037, Fax: 858-587-4878.

Staff Scientist

The Oral and Pharyngeal Cancer Branch of the NIDCR, NIH is recruiting a Staff Scientist to work collaboratively in a program to investigate the function of single or multiple genes in experimental animal models and human cancers of the head and neck, for the benefit of early detection of oral cancers and their improved treatment, and the basic understanding of gene function and disease causes. The individual selected will have overall responsibility for studies that will involve cloning of head and neck cancer specific genes by the use of recently developed techniques such as laser-assisted microdissection, and the further identification, characterization and modification of relevant genes using state-of-the-art molecular cloning techniques. Validation of the biological relevance of genes is expected to involve the use of gene arrays, tissue culture transfer of modified genes into mouse keratinocytes, and the generation of appropriate animal models. Preferably such an individual should have experience in molecular biology, use of gene arrays, bioinformatics, and animal models of disease. Collaborations will be established with other members of the laboratory including postdoctoral fellows and other research investigators both at NIH and other locations to define the contribution of candidate molecules to squamous carcinogenesis. Applicants should have a Ph.D., M.D. D.D.S. or equivalent and relevant postdoctoral experience in molecular and cell biology. Preference will be given to candidates having experience working in molecular biology as applied to the study of carcinogenesis in vitro and in vivo. The candidate will work under the supervision of a tenured senior investigator. Indefinite appointment up to five years. Salary ranges from \$60,890 \$79 155

To be considered, send curriculum vitae, bibliography, and 1- to 2-page summary of research interest and goals, and have three letters of recommendation sent to:

> NIDCR Personnel Office 31 Center Drive, MSC 2290 Building 31, Room 2C39 Bethesda, MD 20892-2290 Phone 301-496-6971

Applications will be accepted until October 16, 2000.

NIH is an equal opportunity employer.



Aptus Genomics, Inc. is a pre-IPO genomics infrastructure company located in the Rockville, Maryland area. The company is seeking qualified applicants for the following positions:

Molecular Biologist - PhD with postdoctoral experience in molecular biology. Experience in cDNA library construction and gene cloning required. Broad-based knowledge and practical experience with bioinformatics tools is desirable.

Research Associate - BS/MS with minimum 3 years experience in molecular biology. Experience in cDNA library construction and gene cloning required. Knowledge of and practical experience with bioinformatics tools is desirable.

Research Associate - BS/MS with minimum 2 years experience in automated DNA sequencing.

Bioinformatics Specialist - PhD/MS with 3+ years experience with Oracle DBMS and bioinformatics tools

Please send CV to Aptus Genomics, Inc. P.O. Box 1217, Rockville, MD 20849 or to

Recruiting@AptusGenomics.com

POST-DOCTORAL FELLOW POSITION

The American Health Foundation is a National Cancer Institute (NCI) - designated Cancer Center that focuses on research in cancer prevention. Located in Westchester, 20 miles north of New York City, AHF offers a unique environment for postdoctoral studies in new and exciting frontiers.

Positions are available to study the molecular mechanisms of oxidative stress in cancer development and cancer susceptibility, including the effects of polymorphisms in disease predisposition. Applicants should have their doctoral degree in a relevant discipline and demonstrated experience in molecular/ cellular biology in addition to excellent communication and writing skills. Postdoctoral fellows will be challenged and encouraged to developed their own areas of research as Principal Investigators.

Interested applicants should send curriculum vitae to:

Dr. John Richie or Dr. Tony Albino American Health Foundation One Dana Road, Valhalla, New York 10595 Email

Richie@nymc.edu and talbino@aol.com

Postdoctoral position available in the Laboratory of Physiologic Studies, Division of Intramural Clinical and Biological Research, National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, to study the regulation of endogenous cannabinoids in the brain, with particular emphasis on their role in the control of appetitive behavior. Research approaches include liquid chromatography/ mass spectrometry analysis of lipid mediators, in situ hybridization histochemistry, immunocytochemical localization of peptide and other neurotransmitters and their receptors. radioimmunoassays, and behavioral studies in rodents. Documented experience in mass spectrometry is an advantage. Applicants must have a Ph.D. or M.D. degree and less than five years of post-doctoral training experience. Competitive salary will be commensurate with relevant research experience. Send C.V. and the names/ addresses of 3 references to:

George Kunos, M.D., Ph.D. Scientific Director, NIAAA 12420 Parklawn Drive, Park/150 Bethesda, MD 20892-8115 Or e-mail: gkunos@mail.nih.gov

NIH is an Equal Opportunity Employer. Applications from women, minorities, and persons with disabilities are strongly encouraged. The DICBR/NIAAA is a smokefree environment.

FOEMED V ADA

FACULTY POSITIONS IN BIOLOGY THE UNIVERSITY OF NEW ORLEANS

The Department of Biological Sciences at the University of New Orleans invites applications for three positions at the ASSISTANT PROFESSOR level in support of our new Doctoral programs in Conservation Biology. (1) Ecologist/Conservation Biologist: working on ecological problems of conservation interest. We especially encourage applicants working on coastal wetlands but will consider applicants working on other aquatic systems. (2) Genetics and/or dy namics of populations: We especially encourage applicants working on conservation genetics but will consider applicants working on metapopulation dynamics, theoretical modeling, and disease ecology. (3) Conservation Biologist: area of specialization open. The successful candidate will be expected to establish a strong, externally funded research program and teach at the graduate and undergraduate levels. Applicants should send current curriculum vitae, statement of research and teaching interests, and three letters of reference to: Conservation Biology Search Committee, Department of Biological Sciences, University of New Orleans, New Orleans, LA 70148. For information about the Department, see website: http://www.uno.edu/~bios. Questions may be directed to e-mail: jsrogers@uno.edu. Review of applications will begin November 10, 2000, and will continue until the positions are filled. The University of New Orleans is an Equal Opportunity/Affirmative Action Employer.

TENURE-TRACK FACULTY POSITION IN DEVELOPMENTAL BIOLOGY GEORGETOWN UNIVERSITY Department of Biology

The Department of Biology invites applications for a tenure-track position to commence August 2001 at the ASSISTANT PROFESSOR level. The Department seeks an energetic Investigator, well trained in developmental biology. The individual selected will be expected to teach two courses annually, including a one-semester advanced course in development and a second course of interest to the candidate. The successful applicant is expected to establish a grant-supported research program involving both undergraduate and graduate students. Enthusiasm for instruction of undergraduate and graduate students is essential.

To apply, include (1) your curriculum vitae, (2) names of three individuals who are familiar with your potential as a teacher and independent research scientist, (3) a short summary of your research achievements and projected research, and (4) a statement describing your teaching philosophy and proposed courses. Please send applications by November 15, 2000, to: Development Search Committee, Box 571229, Department of Biology, Georgetown University, Washington, DC 20057-1229.

Georgetown University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR DEVELOPMENTAL BIOLOGY University of Rochester

Applicants who have demonstrated outstanding potential for independent research in any area of developmental biology (cellular, molecular, evolutionary development; most model systems) are sought for a tenure-track position in the Department of Biology (website: http://www.rochester.edu/College/BIO/ dept.html). Current biology faculty employ genetic and molecular approaches to study problems in cellular, developmental, and evolutionary biology. Additional colleagues with allied interests are located in the adjacent Medical School. Review of applications will begin immediately and continue until the position is filled. Interviews will begin in December 2000. Applicants should submit curriculum vitae, bibliography, summary of research and teaching interests, and request three references to send letters of recommendation to: Chair, Developmental Biology Search Committee, Department of Biology, Box 270211, University of Rochester, Rochester, NY 14627. The University of Rochester is an Equal Opportunity Employer.

POSITIONS OPEN

BIOCHEMISTRY/MOLECULAR BIOLOGY OHIO UNIVERSITY

The Edison Biotechnology Institute (website: www.ohiou.edu/biotech/) and the Department of Chemistry and Biochemistry (website: www.chem.ohiou.edu) at Ohio University invite applications for a tenure-track joint appointment at the ASSIST-ANT/ASSOCIATE PROFESSOR level in the area of biochemistry, molecular biology, or related fields. The Department of Chemistry and Biochemistry in the College of Arts and Sciences (website: www-as.phy.ohiou.edu/index.html) is the unit in which the tenure will reside. The candidate should have a Ph.D. or M.D. degree and significant postdoctoral experience.

The successful applicant will join a group of Scientists with general research strengths in enzymology, cellular biology, molecular biology, macromolecular structure, endocrinology, and developmental biology. The applicant will have access to Master's and Doctoral students in the Department of Chemistry and Biochemistry and state-of-the-art research facilities at the Edison Biotechnology Institute. Ohio University is a state-assisted university with a Carnegie Research II status. The Department of Chemistry and Biochemistry has 23 full-time tenure-track faculty with approximately 350 undergraduate majors and 50 graduate students.

Duties will include the development of a rigorous research program that includes protection of intellectual property with the potential to develop and commercialize the novel technologies through the Edison Biotechnology Institute, an organization that proactively fosters this type of activity. Additionally, the candidate will be expected to assist in undergraduate and graduate teaching and service responsibilities in the Department of Chemistry and Biochemistry.

Applications, including curriculum vitae, a statement of research interest, and three letters of recommendation, should be sent to: Martin T. Tuck, Ph.D., Department of Chemistry and Biochemistry, Clippinger Laboratories, Ohio University, Athens, OH 45701. E-mail: tuck@ohio.edu. The position will start September 1, 2001, pending final administrative approval. The screening of applications will begin on November 1, 2000, and continue until the position is filled. Ohio University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.

ASSISTANT PROFESSOR PLANT ECOLOGIST

Connecticut College invites applications from exceptional teacher/scholars for a tenure-track position in plant community ecology to begin July 2001. Teaching responsibilities include plant ecology, plant systematics, and an additional course to complement our programs in botany, biology, and environmental studies. The successful candidate also will be expected to develop an active research program that involves undergraduates and share responsibility for the study of long-term biotic change initiated five decades ago in the College's arboretum. A Ph.D. is required; postdoctoral work and teaching experience are desirable. Connecticut College is highly selective, with a strong commitment to the liberal arts tradition and a rich history in ecological and botanical research and education. Facilities include the 750-acre campus arboretum with a diverse array of plant collections and community types, greenhouse, a 16,000-specimen herbarium, boats, teaching and research laboratories, and outstanding light and electron microscopy facilities.

Applications, including a cover letter, curriculum vitae, three letters of recommendation, copies of transcripts, and a statement of teaching and research philosophy, should be sent to: T. Page Owen, Jr., Chair, Department of Botany, Connecticut College, 270 Mohegan Avenue Number 5555, New London, CT 06320-4196. Website: http://www.conncoll.edu. Application review will begin December 1, 2000, and continue until the position is filled. Connecticut College is actively seeking to increase faculty diversity; Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

TENURE-TRACK POSITION Department of Anatomy and Cell Biology University of Saskatchewan

The Department of Anatomy and Cell Biology invites applications for a tenure-track appointment at the rank of ASSISTANT PROFESSOR effective July 1, 2001. Areas of departmental research include cell and molecular biology, developmental biology, and neurobiology. Applicants must have postdoctoral training and a strong research program involving the application of molecular biology/cell biology ap proaches in one of the above areas. The successful candidate will be expected to teach in the area of histology or gross anatomy. Previous teaching experience will be considered an asset. An application, including curriculum vitae, names of three references, and a statement of previous teaching experience and research interests, should be submitted by December 15, 2000, to: Dr. B.H.J. Juurlink, Department of Anatomy and Cell Biology, College of Medicine, University of Saskatchewan, 107 Wiggins Road, Saskatoon, Saskatchewan S7N 5E5 Canada.

For further information about the Department, check website: http://www.usask.ca/anatomy/; for the College and its programs, check website: http://www.usask.ca/medicine/.

The University is committed to Employment Equity. Members of designated groups (women, aboriginal people, people with disabilities, and visible minorities) are encouraged to self-identify on their applications. This position has been cleared for advertising at the two-tier level. Applications are invited from qualified individuals regardless of their immigration status in Canada.

EPITHELIAL TRANSPORT PHYSIOLOGIST

The Department of Physiology at The University of Arizona, College of Medicine, invites applications for a tenure-track, fiscal-year position at the rank of AS-SISTANT PROFESSOR. Preference will be given to individuals using molecular and cellular tools to study the mechanisms of epithelial solute and/or water transport, particularly in the kidney. The successful candidate will be expected to establish an independent research program in an area that will complement existing strengths and contribute to the teaching mission of the Department. Qualifications include the Ph.D., M.D., or equivalent and two or more years of postdoctoral training. Candidates with demonstrated experience in teaching and success in acquiring independent funding are especially encouraged to apply. The position is available beginning September 1, 2001. Review of applications will begin November 15, 2000, and continue until the position is filled. Submit a letter of application, a summary of teaching and research goals, curriculum vitae with the names of three references, and three reprints to: Job Number 994421, Epithelial Transport Search Committee, Department of Physiology, The University of Arizona, Tucson, AZ 85724-5051. More information about the Department can be found at website: http://www.physiol.arizona.edu/. The University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer; Minorities/Women/Disabled/Veterans.

Allegheny College invites applicants for a tenure-track ASSISTANT PROFESSOR position in environmental studies to begin August 1, 2001. The successful candidate will demonstrate the ability to teach undergraduates and develop a scholarship program involving students. Interest in a program with an applied and experiential emphasis is required. Applying GIS to environmental problem solving is helpful. A Ph.D. or appropriate terminal degree is necessary. Allegheny College is a highly selective liberal arts college. For more information, see websites: http://www.alleg.edu/academics/EnvSci/links.html and http: //ceed.alleg.edu. Send application letter, statements of teaching and research interests, three reference letters, and curriculum vitae by November 15, 2000, to: Dr. Richard Bowden, Department of Environmental Science, Allegheny College, Meadville, PA 16335. E-mail: rbowden@alleg.edu. Equal Opportunity Employer. Women and minorities encouraged.

ENDOWED PROFESSORSHIPS IN SOYBEAN BIOTECHNOLOGY AND FUNCTIONAL GENOMICS Plant Sciences Unit, University of MissouriColumbia

The University of Missouri-Columbia has openings for two Endowed Professorships in Soybean Biology in the College of Agriculture, Food and Natural Resources. Endowments from industry and the State of Missouri will provide annual funds for research support. Newly renovated laboratory space will be provided.

Soybean Biotechnology (Depts. of Agronomy and Biochemistry)

This program will focus on the improvement of soybean. For example, this scientist might work on any of the following: superior oils and proteins, ability to produce pharmaceuticals and other compounds important to human and animal health, abiotic stress tolerance, improved insect resistance, or other value-added traits. For further information, contact Robert Sharp (phone 573-882-1841; e-mail: sharpr@missouri.edu).

Functional Genomics: Plant-Microbe Interactions (Dept. of Plant Microbiology and Pathology)

This program will focus on the application of genomics to soybean-microbe interactions. For example, this scientist might work on any of the following: recognition between plants and microbes (including fungi, bacteria, viruses or nematodes), signal transduction, and host plant resistance. For further information, contact James Schoelz (phone 573-882-1185; e-mail: schoelzi@missouri.edu).

Initial screening of applications will begin on December 1, 2000, and continue until a qualified candidate is identified. Please submit a curriculum vitae, a 1-2 page statement of research interests and goals, a brief statement of teaching interests, and names of three references to: Soybean Search Committees c/o Margie Anglen, Plant Sciences Unit, 1-41 Agriculture Building, University of Missouri, Columbia, MO 65211.

The University of Missouri is an Equal Opportunity/Affirmative Action Employer and specifically invites and encourages application from qualified women and minorities.



POSTDOCTORAL POSITIONS IN CYTOKINE SIGNAL TRANSDUCTION

Postdoctoral positions are immediately available to study the biochemistry of the regulation of signal transduction by the cytokine receptor superfamily. The emphasis of the laboratory is in the area of cytokines that affect hematopoietic lineages, particularly erythropoietin, although studies involving other cytokines are ongoing. The approaches being utilized in the laboratory include biochemical and genetic approaches to identify proteins that participate in cytokine receptor complexes. The laboratory extensively utilizes gene manipulations in mice to explore the function of individual and combinations of gene products. M.D., M.D./Ph.D. or Ph.D. training in molecular biology and/or biochemistry is essential with some training in hematopoiesis being desirable. Competitive stipends are available as well as a benefit package that includes professional developmental funds for journal subscriptions and travel. Applicants should submit a curriculum vitae with names of three references and a cover letter indicating future goals to:

James N. Ihle, Ph.D.
Howard Hughes Medical Institute
Department of Blochemistry
St. Jude Children's Research Hospital
332 N. Lauderdale
Memphis, TN 38105
E-mail: kathy.fry@stjude.org

www.stjude.org

AA/EOE M/F/D/V



Harvard University Director of Research Affairs Center for Genomics Research

The Faculty of Arts and Sciences seeks a Director of Research Affairs to play a leading role in the Center for Genomics Research, a multi-disciplinary research center that develops and uses new technology for the integrative analysis of biological processes. In close collaboration with the Scientific Director, the Director of Research Affairs will develop and communicate a strategic vision for the Center, raise funds, hire Fellows, and provide outreach to faculty within the Faculty of Arts and Sciences and the University. The Director of Research Affairs will serve as the chief operating officer of the Center and will oversee its financial, facilities, and human resource functions. For more information about the Center, see our website at www.cgr.harvard.edu.

REQUIREMENTS: The successful candidate will have a broad scientific background, with a Ph.D. in biology or related fields. Familiarity with the field of genomics is essential. Other requirements are excellent written and verbal communication skills; experience in grant writing; the ability to communicate with scientific and lay audiences; strong general administrative skills and a demonstrated ability to manage a program of this scope.

Please send cover letter and resume to: Professor Andrew Murray, c/o Resume Processing Center, Req. #7431, 11 Holyoke Street, Cambridge, MA 02138.

Equal Opportunity Employer



Sierra Sciences is a new biotech company focused on the development of therapeutics for human diseases through analysis and control of gene promoter regulation. We have a dynamic, fast paced approach toward applied research that incorporates novel ideas and unique strategies. Nestled in the foothills of the Sierra Nevada Mountains, our location offers a university environment, affordable housing, year round outdoor activities, great skiing and the beauty of nearby Lake Tahoe.

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Sierra Sciences, Inc. Human Resources P.O. Box 8981 Reno, Nevada 89507 Fax (775)327-5073 kelag @earthlink.net

Equal Opportunity Employer

Tenure-Track Investigator, Molecular Mechanisms of Disease

The Genetics of Development and Disease Branch, NIDDK, NIH in Bethesda, MD seeks to recruit a tenuretrack scientist who will use cellular, molecular and/or genetic approaches to study molecular mechanisms of human disease. The investigator will be given resources and newly renovated laboratory space to pursue a vigorous and effective research program. The position offers unparalleled opportunities for multidisciplinary research and for interactions with a diverse group of outstanding scientists in the NIDDK and the throughout the NIH. For information about the NIDDK and the Genetics of Development and Disease Branch, see: http://www.niddk.nih.gov.

Candidates must have a Ph.D., M.D. or equivalent degree in the biomedical sciences, demonstrated research productivity, and capability of establishing an innovative, independent research program. Competitive salary and benefit packages are available. Applicants should send a curriculum vitae, an outline of their future research and three letters of reference to Ms. Elizabeth Perry; Building 10, Room 9N-314; 10 CENTER DR MSC 1821; Bethesda, MD, 20832. The closing date is November 15, 2000.

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BIOLOGY FACULTY POSITIONS UNIVERSITY OF NEBRASKA AT OMAHA

ASSISTANT PROFESSOR, invertebrate zoology. Ph.D. required; postdoctoral experience desirable. Teaching responsibilities include an introductory biology course for majors and advanced courses for undergraduate and graduate majors.

ASSISTANT PROFESSOR, plant physiology.

Ph.D. required; postdoctoral experience desirable. Teaching responsibilities include a team-taught biology course for nonscience majors and plant physiology for undergraduate and graduate majors. Advanced or specialty courses may be developed.

ASSOCIATE/ASSISTANT PROFESSOR, environmental biology. Ph.D., teaching, and/or postdoctoral experience required. The successful candidate will teach introductory and advanced courses for students majoring in biology and environmental studies and act as Director of the multidepartmental Environmental Studies Program.

All candidates will develop active research programs. The University and department are strongly committed to achieving diversity among faculty and staff. Screening of applications will begin 1 November 2000 and continue until positions are filled. Send curriculum vitae, statements of teaching and research objectives, and three letters of recommendation to: Chair, Department of Biology, University of Nebraska at Omaha, 6001 Dodge Street, Omaha, NE 68182-0040. See website: www.unomaha.edu/ ~wwwbio. We are particularly interested in receiving applications from members of underrepresented groups and strongly encourage women and persons of color to apply for these tenuretrack positions.

FACULTY POSITION MOLECULAR BIOLOGY/BIOCHEMISTRY OF MINERAL NUTRIENTS

The University of Missouri-Columbia is seeking a tenure-track ASSISTANT PROFESSOR of nutritional sciences with a Ph.D. and postdoctoral experience in biochemistry, molecular biology, nutritional sciences, or related area. The successful applicant will be expected to develop a nationally funded research program using molecular and biochemical techniques to study questions of broad nutritional importance in model systems at any phylogenetic level. Preference will be given to individuals focused on metal-related regulation of gene expression, metal ion transport, inborn errors of metal metabolism, or metalloprotein biochemistry. Application of genomic/proteomic technologies is also desirable. Laboratory space will be provided in remodeled facilities. This position is funded by the Life Sciences Mission Enhancement program and includes support for technical staff. Some teaching responsibilities are also included. Applica-tions will be accepted until December 1, 2000, or until the position is filled.

Send curriculum vitae, representative publications, summary of past research and teaching accomplishments and future research plans, and arrange for three letters of reference to be sent to: Dr. David Eide, Search Committee Chair, Department of Nutritional Sciences, 217 Gwynn Hall, University of Missouri, Columbia, MO 65211. For more information, visit our website: http://web.missouri. edu/~nutsci/.

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

Environmental Studies at California State University, Sacramento, seeks a DEPARTMENT CHAIR for the Environmental Studies Department, an interdisciplinary undergraduate program. Review of applications begins November 1, 2000; position open until filled. See website: http://csueb.sfsu.edu for a complete vacancy announcement or contact: Environmental Studies Department, California State University, Sacramento, 6000 J Street, Sacramento, CA 95819-6001. Telephone: 916-278-6620.

CSUS is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and minority group members.

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY AMHERST COLLEGE

The Biology Department at Amherst College invites applications for a tenure-track position at the ASSISTANT PROFESSOR level in the field of evolutionary biology. We seek an Organismal Biologist whose research integrates evolution with genetics, physiology, or ecology. Development of a funded research program with student participation and with a strong field and/or laboratory component is expected. Teaching duties include an upper-level evolution course, participation in an introductory course with laboratory, and one or more courses in the candidate's specialty. Ph.D. is required, and postdoctoral experience is preferred.

Amherst College is a private undergraduate liberal arts college for men and women with 1,600 students and 165 faculty. Located in the Connecticut River Valley of western Massachusetts, Amherst participates with Hampshire, Mount Holyoke, and Smith Colleges and the University of Massachusetts in the Five-College Corsortium.

Send curriculum vitae, statement of research and teaching interests, and three letters of recommendation to: Evolutionary Biology Search Committee, Department of Biology, Amherst College, Amherst, MA 01002-5000. Review of applications will begin on November 15, 2000. Further information on the Department can be found at website: http:// www.amherst.edu/~biology.

Amherst College is an Equal Opportunity/Affirmative Action Employer and encourages women, minorities, and persons with disabilities to apply. The administration, faculty, and student body are committed to attracting talented candidates from groups now underrepresented on campus.

RESEARCH ASSISTANT PROFESSOR

The Department of Pathology, Immunology, and Laboratory Medicine at the University of Florida College of Medicine invites applications for a nontenuretrack faculty position at the Research Assistant Professor level. This individual must have expertise in cellular biology and molecular biology to carry out research focused on urolithiasis. Research areas include but are not limited to role of oxalate in cellular injury, gene regulation by oxalate toxicity, and the role of free radicals in oxalate-associated injury. Applicant must have a Ph.D. degree and must demonstrate a strong commitment to research and the potential for development of a high-quality research program in urolithiasis. Salary is negotiable based on experience and training. Anticipated start date is February 1, 2001. Interested applicants should send a letter of application outlining interests and a copy of their curriculum vitae by December 1, 2000, along with three letters of reference to:

Saeed Khan, Ph.D. Search Committee Chairperson University of Florida College of Medicine Department of Pathology, Immunology, and Laboratory Medicine Box 100275 JHMHC Gainesville, FL 32610-0275

Equal Opportunity/Affirmative Action Employer.

MOLECULAR SYSTEMATICS/ **EVOLUTIONARY BIOLOGY**

St. Olaf College invites applications for a tenure-track position at the ASSISTANT PROFESSOR rank beginning September 2001. Applicants should have a strong interest in quality undergraduate teaching, be committed to liberal arts education, and show promise of continued scholarly activity and professional growth (including a research program in the systematics of a multicellular taxon that involves undergraduates and utilizes modern molecular techniques). See website: http://www.stolaf.edu/ offices/dean-of-college/biologist.html for more information. Review of completed applications will begin on October 30, 2000. A liberal arts college of the Lutheran Church (ELCA), St. Olaf College is an Affirmative Action/Equal Opportunity Employer and actively seeks diversity in its students, faculty, and staff.

POSITIONS OPEN

TWO TENURE-TRACK FACULTY POSITIONS AT WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

The Division of Dermatology at Washington University School of Medicine in St. Louis, Missouri, is seeking two outstanding individuals with M.D., Ph.D., or M.D./Ph.D. degrees to fill tenure-track faculty positions at the ASSISTANT PROFESSOR level. Applicants are expected to develop an independent basic research program focusing on cancer biology, molecular mechanisms of aging, developmental biology, or functional studies of genes. Outstanding applicants with other research interests will also be considered. Successful candidates will be considered for a joint appointment in preclinical departments. Those with Dermatology Board certification will also have the opportunity to join the faculty clinical practice. These positions are available immediately. Competitive salary and generous start-up packages are available. Applicants should send curriculum vitae, summary of research interests, and three letters of reference to: Dermatology Faculty Search, Ms. Pam Gassner, Division of Dermatology, Washington University School of Medicine, 660 South Euclid, Box 8123, St. Louis, MO 63110. E-mail: gassnerp@msnotes.wustl.edu. Review of applicants will begin on October 15, 2000, but applications will be accepted until suitable candidates are identified.

PLANT MOLECULAR BIOLOGIST

Plant Molecular Biologist: tenure-track ASSIST-ANT PROFESSOR beginning August 2001. The Department of Biological Sciences at the University of North Carolina at Wilmington is accepting applications from candidates representing subdisciplines of plant molecular biology. Applicants should be using current methods to investigate the physiology, cell biology, development, or genetics of vascular plants at the molecular level. Applicants with interests in applied aspects of plant molecular biology are encouraged to apply. Duties include teaching undergraduate and graduate courses, including molecular biology/genetics and plant physiology. The successful candidate is also expected to maintain an active, externally funded research program and direct graduate student research. Ph.D. and postdoctoral experience is required. Send curriculum vitae, a brief statement of research and teaching interests, all transcripts, names of three references, and selected reprints by October 30, 2000, to: Dr. Donald F. Kapraun, Department of Biological Sciences, The University of North Carolina at Wilmington, Wilmington, NC 28403-3297 U.S.A. Please see our website: uncwil.edu for additional information. If you have questions, e-mail: kapraund@uncwil.edu. University of North Carolina at Wilmington is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply

ASSISTANT PROFESSOR **EVOLUTIONARY BIOLOGIST**

The Department of Biology at the University of Rochester invites applications for an Evolutionary Biologist in a tenure-track position of Assistant Professor. Individuals conducting research in any branch of evolutionary biology are encouraged to apply. Of particular interest are those using molecular, genetic, computational, or ecological genetic approaches to elucidate the evolutionary process. Review of applications will begin November 1, 2000, and continue until the position is filled. Applicants should submit curriculum vitae; statements of research and teaching interests; copies of no more than four papers (published or in press); and the names, addresses, telephone and FAX numbers, and e-mail addresses of three references to: Chair, Evolutionary Biology Search Committee, Department of Biology, University of Rochester, Rochester, NY 14627. The applicant should also send his or her curriculum vitae, research statement, and up to four papers via e-mail to: eb_search@brahms.biology.rochester.edu. For more information, see website: http://brahms. biology.rochester.edu/search.html.

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Director of Computational Biology (Job code: CMP401phd) Ph.D. and 6-10+ years experience in structural biology, molecular modeling and/or bioinformatics and software development.

Computational Scientist (Job code: CMP401phd)

Ph.D. in structural biology, molecular modeling and/or bioinformatics. 0-3 years post-graduate experience. Strong knowledge of UNIX, current molecular modeling, and bioinformatics methods.

Research Associates (Job code: PCD401bs)

BS/MS in Biological Sciences with 2 years experience in molecular biology, biochemistry or cell biology.

Senior Research Scientists (Job code: PCD401phd)

Ph.D. in molecular biology with strong research experience in molecular biology, assay development or phage display systems, ideally in an industrial setting.

Director of Proteomics (Job code: CPD401dir)

Ph.D. in biological sciences with demonstrated managerial experience in the biotech or pharmaceutical industry. Strong research experience in phage display systems or proteomics will be a plus.

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Faculty Positions in Bioinformatics and Molecular Biology

Department of Biochemistry and Biophysics Texas A&M University

The Department of Biochemistry and Biophysics at Texas A&M University invites applications for three tenure-track positions. **Bioinformatics** (1 position) - Research with a substantial component involving application of computational methods to modern molecular life sciences. Applications should be sent to Chair, Bioinformatics Search Committee. **Molecular Biology** (2 positions) - Research that addresses fundamental problems in any area of Molecular Biology or Molecular Genetics. Applications should be sent to Chair, Molecular Biology Search Committee. Candidates whose expertise fits into both of these areas may be considered by both search committees.

The appointments are likely to be at the Assistant Professor level, but inquiries from more senior candidates are encouraged. Successful candidates will be expected to establish an active research program and to participate in the teaching missions of the department. These positions offer a chance to join a Department with an energetic and interdisciplinary faculty, an excellent graduate program, and ample opportunities for collaborations with enthusiastic colleagues in this and other departments. With a student population of over 40,000, Texas A&M is an outstanding university centrally located between Dallas, Austin and Houston. For more information about the Department, see http://www.tamu.edu/biobio/.

Applicants should send a curriculum vitae, reprints of significant publications, statement of research interests and arrange to have three letters of reference sent to

Dept. of Biochemistry and Biophysics Texas A&M University 2128 TAMU College Station TX 77843-2128

Review of applications will begin October 15, 2000, and continue until the positions are filled. Texas A&M University is an Affirmative Action/Equal Opportunity Employer committed to diversity.



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1 Science, June 2000, BPA Publisher's Statement.

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GLOBAL OPPORTUNITIES

National Health Research Institutes (NHRI) Taiwan, R.O.C. Investigator and Postdoctoral Fellow Positions

The National Health Research Institutes (NHRI) is a non-profit research organization supported by the Government of the Republic of China. The purpose of NHRI is to promote and develop medical and health related research in the hope of enhancing social welfare. Through intramural and extramural programs, NHRI conducts and supports mission-oriented research in its own laboratories and in other research institutions throughout the country. The Division of Biotechnology and Pharmaceutical Research is embarking on an innovative and integrated drug discovery program based on molecular biology, combinatorial chemistry, structure-based drug design and high-throughput bioscreening. Applicants are invited in the areas of tumor biology, cell biology, virology, metabolic disease, neurodegenerative disease, animal models, pharmacokinetics, drug metabolism, medicinal chemistry, and combinatorial chemistry. Investigators of all ranks (assistant, associate and full) and postdoctoral fellow positions are available

Applicants should have Ph.D. degrees and industrial R & D experience is highly welcomed. Application should include a letter of intent, curriculum vitae with a publication list, a brief research proposal, reprints of selected publications, and three reference letters. Forward your application to:

Dr. Ming-Chu Hsu, Director
Division of Biotechnology and Pharmaceutical Research
National Health Research Institutes
128 Yen-Chiu-Yuan Road, Sec II, Taipei 115, Taiwan, R.O.C.

Tel: 886-2-2653-4401 ext 6110; Fax: 886-2-2789-0264 E-mail: mingchu@nhri.org.tw NHRI Web site—http://www.nhri.org.tw

PROFESSOR MICROSCALE FLUID MECHANICS/MICROFLUIDICS Northwestern University

Northwestern University is searching for a seniorlevel faculty member with broad expertise in any aspect of microscale fluid flow and/or microfluidics whose research and teaching will significantly impinge on interdisciplinary activities at Northwestern in areas including complex fluids, electrokinetics, lab-on-achip devices, microfluidic devices, MEMS, or bioanalytical applications of microfluidics. The faculty member will be appointed to one or more departments in the McCormick School of Engineering and Applied Science. The individual should have a well-established, internationally recognized research program that is intrinsically interdisciplinary and will flourish with the expanding interest in microscale phenomena and devices. In order to ensure full consideration, applications must be received by February 1, 2001 Hiring is contingent upon eligibility to work in the United States. Further information can be obtained from: Search Committee Chairman, Stephen H. Davis, Department of Engineering Sciences and Applied Mathematics, Northwestern University, Evanston, IL 60208. E-mail: sdavis@northwestern. edu. Northwestern University is an Affirmative Action/Equal Opportunity Employer. Women and individuals in underrepresented groups are encouraged to apply.

ASSISTANT PROFESSOR IN BIOLOGY

The Department of Biology seeks applicants for a tenure-track Assistant Professor with primary teaching responsibilities in cell biology/molecular biology and introductory biology. Candidates must have the Ph.D.; primary interest in undergraduate education; be able to supply molecular techniques to a broad range of biological problems; and assist faculty, undergraduate, and Master's-level research students in basic molecular techniques. Interested applicants should submit (1) an official letter of application; (2) a résumé; and (3) the names, addresses, and telephone numbers of five professional references to: Bonnie Amos, Department of Biology, Angelo State University, San Angelo, TX 76909. Official transcripts will be required of applicants selected for interview. Deadline is open but may be closed at any time after November 1, 2000.

RESEARCH SCIENTIST, cell biology. Part of cell and molecular biology team working with disease groups (including oncology) developing and implementing innovative cell-based and molecular biological assays. Cell biology assays include protein analysis (Western and immunoprecipitation, purification of GST fusion protein); in vitro cell-based validation assays for potential drug target gene; cell trasfection; cell proliferation assay by FACS analysis; and cell migration assays. Perform in vivo experiments using mice as model. Molecular biology assays include DNA manipulation (isolation, subcloning); RNA manipulation (isolation); hybridization; molecular cloning (PCR, RT-PCR). Perform validation studies and write report of findings and recommendations. Requirements: M.S. in biology or biochemistry and two years of experience in position or Research Assistant or closely related. Background must include two years of experience in biochemistry and molecular biology and in vitro/in vivo cell biology; experience may be gained concurrently. Forty hours per week. Salary commensurate with experience. Résumés to: Box Number 93, 1200 New York Avenue, Room 914, Washington, DC 20005.

ASSOCIATE PROFESSOR in biochemistry and molecular biology at Finch University of Health Sciences/Chicago Medical School with research interests in protein structure/function. Candidates must have an established and independent research program with current extramural funding. Details at website: www.finchcms.edu/biochem/Biochem. html or send curriculum vitae and names of three references to: Dr. K. E. Neet, Chairman, Finch UHS/Chicago Medical School, 3333 Green Bay Road, North Chicago, IL 60064.

POSITIONS OPEN

The Nature Conservancy's Illinois chapter seeks a DIRECTOR OF CONSERVATION SCIENCE to join our outstanding team of conservation professionals. Graduate degree in ecology, conservation biology, or related field and at least five years of relevant work experience required. Competitive salary and benefits package. Please send your résumé to: Search Committee, The Nature Conservancy, 301 S.W. Adams Street, Suite 1007, Peoria, IL 61602. Equal Opportunity Employer.

JUSTIFICATION: PERSONNEL REQUISITION 023617

The Laboratory of Vaccine Research seeks an experienced CHEMIST in the field of peptide or organic synthesis to assist Investigators with projects in immunology research. Responsibilities of this individual include the components of the peptide synthesis laboratory, which include a large-capacity automated peptide synthesizer, analytic and preparative HPLC, and a KRATOS MALDI. Synthesis, purification, and characterization of peptides are done in-house in the facility. Opportunities for collaborations with investigators conducting research in infectious diseases and cancer are available. Clinical trials using cGMP peptides are upcoming, and the successful candidate will be involved with consultations with NCI and other potential industrial partners concerning the analysis and formulation of clinical-grade materials. Master'sor postdoctoral-level individuals are encouraged to apply. Salary commensurate with experience.

Please send cover letter, curriculum vitae, and names and contact information of three references to: Attention: Ileana Abich, Needleman Building, Room 209, City of Hope, 1500 East Duarte Road, Duarte, CA 91010-3000. FAX: 626-930-5394; e-mail: iabich@coh.org.

RESEARCH AND DEVELOPMENT

Athena Diagnostics, Inc. is one of the leading companies that develops and provides genetic testing for human diseases. We currently offer over 70 tests for neurological disorders that utilize a wide range of advanced molecular technologies. We have a strong history of successfully making available novel genetic testing services in our leading-edge laboratory facility in Worcester, Massachusetts. We offer an exciting, fastpaced working environment and excellent opportunities for career development to highly motivated individuals with molecular biology-based backgrounds.

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Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSISTANT PROFESSOR (NONTENURE TRACK)

Department seeks a highly motivated Ph.D. to work on MUC1 mucin signaling pathways. The candidate must be a U.S. citizen or permanent resident and have a strong publication record with at least three years of postdoctoral experience in protein chemistry and immunochemistry. Experience in lung cell biology and protein phosphorylation is highly preferred. Previous pharmaceutical/biotechnology industry employment a plus. To apply, send curriculum vitae, description of relevant work experience, and three letters of recommendation by 22 October 2000 to: Dr. K. Chul Kim, Department. of Pharmaceutical Sciences, University of Maryland, School of Pharmacy, 20 North Pine Street, Baltimore, MD 21201. An Equal Opportunity Employer.

POSITIONS OPEN

NEUROBIOLOGY TENURE-TRACK ASSISTANT PROFESSOR BARNARD COLLEGE

The Department of Biological Sciences at Barnard College, Columbia University, is seeking a full-time ASSISTANT PROFESSOR (starting August 2001) to participate in undergraduate teaching and establish an active research program. The successful applicant will use modern laboratory techniques to investigate neurobiological processes. Research organisms may include small vertebrates or invertebrates. For additional information, see website: http://128.59.158.67/neurojob.htm.

Teaching responsibilities include an advanced lecture and laboratory course in neurobiology, a senior seminar in area of specialty, and participation in introductory biology courses. Candidates should be broadly trained in biology. Ph.D. is required; postdoctoral and prior teaching experience desirable.

Applicants should send curriculum vitae, research and teaching statements, three representative publications, and three letters of recommendation to: Neurobiology Search Committee, Department of Biological Sciences, Barnard College, 3009 Broadway, New York, NY 10027. E-mail: ljohnson@barnard.edu.

Barnard College is an Equal Opportunity Employer.

TROPICAL ECOSYSTEMS

The Department of Botany, University of Florida, seeks a tenure-track ASSISTANT PROFESSOR of tropical ecology to start in August 2001. We seek an individual who conducts field research on terrestrial or wetland ecosystem processes in the tropics. Candidates must have a Ph.D., substantial research experience in the tropics, a record of published research, and interest in teaching at the undergraduate and postgraduate levels. Submit letter of application, curriculum vitae, and research and teaching statements, and have three letters of recommendation sent by 14 November 2000 to: Dr. Francis E. Putz, Search Committee, Department of Botany, P.O. 118526, University of Florida, Gainesville, FL 32611. Telephone: 352-392-1486; FAX: 352-392-3993; e-mail: fep@botany.ufl.edu; website: web.botany. ufl.edu/. The University of Florida is an Affirmative Action/ Equal Opportunity Employer.

PLANT PHYSIOLOGIST MINNESOTA STATE UNIVERSITY MANKATO, MINNESOTA

The Department of Biological Sciences invites applications for a tenure-track ASSISTANT PROFES-**SOR** position in the area of plant physiology. A Ph.D. in plant science with an emphasis in plant physiology is required. Duties include teaching undergraduate and graduate courses, developing a research program that involves both undergraduate and graduate students, and serving on Departmental committees. The position begins on 20 August 2001. A complete Notice of Vacancy, position description, and application procedure can be obtained at website: www.mnsu. edu/dept/humanres/employment.html or by contacting: Department of Biological Sciences; Telephone: 507-389-2786. Review of the applications will begin on Friday, November 3, 2000. Minnesota State University, Mankato, is an Affirmative Action/Equal Opportunity Employer.

TOXICOLOGISTS/SCIENTISTS

TPMC has immediate openings for M.S. and Ph.D.-level professionals with experience in toxicology, pharmacology, or related life science disciplines with emphasis on chemical carcinogenesis. Epidemiology background a plus! Job involves evaluation of carcinogenicity studies and similar scientific papers and synthesis of information for high-profile national and international publications. Demonstrated technical writing and editing of peer-reviewed publications involving carcinogenesis end points required. E-mail résumés to: staffing@tpmc.com; FAX: 919-941-6501. TPMC is an Equal Employment Opportunity/Affirmative Action Employer.

The University of Illinois at Urbana-Champaign School of Molecular & Cellular Biology Multiple Faculty Positions in Molecular and Cellular Biology

The School of Molecular and Cellular Biology at the University of Illinois at Urbana-Champaign invites applications for faculty positions in all areas of Molecular and Cellular Biology. This search is part of a multi-year recruitment program. Of particular interest this year are the areas of:

Bioinformatics
Cell Biology
Cellular Neurobiology
Genetics relevant to human disease

Immunology Physiology Structural Biology Virology

These positions are full-time and tenure track in the departments of Biochemistry, Cell and Structural Biology, Microbiology, and Molecular and Integrative Physiology in the College of Liberal Arts and Sciences and in the College of Medicine. Although we anticipate most of these appointments will be made at the Assistant Professor level, applications for positions at the Associate and Full Professor levels will also be considered and highly qualified scientists at these levels are encouraged to apply. The starting date for these positions is August 2001. Appointment at the Assistant Professor level requires a doctoral degree, postdoctoral experience, and evidence of outstanding research potential. Appointees at this level will be expected to develop a vigorous, independently funded research program. Appointment at higher levels requires evidence of outstanding research accomplishments including extramural funding and national recognition. Applicants at all levels will be expected to contribute effectively to undergraduate/graduate teaching.

The University of Illinois is committed to significant future growth in the biological sciences and we anticipate additional hires in these and related areas each year for the next several years. Successful candidates will be provided with excellent laboratory facilities, substantial start-up funds, and a salary commensurate with experience. The University of Illinois at Urbana-Champaign offers a highly interactive, interdisciplinary research environment and state-of-the-art research support facilities. Urbana-Champaign offers the residential advantages of a medium-sized university city, excellent cultural opportunities and easy access to Chicago and St. Louis. Information concerning the School of Molecular and Cellular Biology at the University of Illinois can be found at http://www.life.uiuc.edu/mcb/.

Applicants should submit their application to: School of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign, 393 Morrill Hall, 505 S. Goodwin Ave., Urbana, IL 61801. An application must include curriculum vitae with a complete list of publications, a concise summary of research interests and future plans. Please specify research area, identified above, in top right corner of cover letter. Also, please arrange to have four letters of recommendation sent to the same address.

Electronic submissions as pdf files are encouraged and should be sent to mcbsearch@life.uiuc.edu. To ensure full consideration, applications should be received by Dec. 15, 2000. Interviews may be conducted before the closing date; however, no hire will be made until after the closing date.

The University of Illinois at Urbana-Champaign is an Affirmative Action, Equal Opportunity Employer.

THE UNIVERSITY OF TEXAS AT DALLAS HEAD - DEPARTMENT OF MOLECULAR & CELL BIOLOGY

The University of Texas at Dallas invites applications and nominations for the position of Head of the Department of Molecular and Cell Biology. The successful candidate will be eligible to hold the Cyrus L. and Amelia A. Lundel Professorship of Life Sciences. He/she will have strong administrative and leadership abilities, an excellent record in scholarly research and teaching, and the demonstrated ability to attract external funding. The research may be in any area of molecular and cell biology. A competitive package of support resources will be customized to fit the needs of the successful applicant. The Department of Molecular and Cell Biology (http://nsm1.utdallas.edu/bio/) focuses on basic research and education at the doctoral and undergraduate levels and is housed in the School of Natural Sciences and Mathematics. The University is now planning a major renovation and expansion of the physical facilities of the School. Applicants should send a curriculum vitae, a short description of research plans, a concise statement of leadership philosophy, and names addresses and phone numbers of five references to: Academic Search #2043, The University of Texas at Dalla, P.O. Box 830688, M/S AD 23, Richardson, TX 75083-0688 The target starting date is September 1, 2001. Review of applications will begin immediately and continue until the search is closed. Indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required. The University of Texas at Dallas is an Equal Opportunity Affirmative Action employer and strongly encourages applications from candidates who would enhance the diversity of the University's faculty and administration

GLOBAL OPPORTUNITIES



The University of Western Australia

CHAIR IN DIABETES RESEARCH UNIVERSITY DEPARTMENT OF MEDICINE

Applications are invited for appointment to the Chair in Diabetes Research in the University Department of Medicine. The successful applicant for the Chair in Diabetes Research will be a senior faculty member of The Western Australian Institute for Medical Research (WAIMR). This position provides a challenging opportunity for a suitably qualified person who has a record of leadership in the area of diabetes research. Applicants must have an outstanding relevant research record, holding at least one national or international competitive grant and have had at least five years continual funding. The appointee will be expected to establish an internationally recognised diabetes research laboratory. Applicants must have an outstanding record in laboratory based diabetes research with a focus on the mechanisms underlying the development of diabetes and/or its complications. Applicants must hold appropriate higher qualifications. The position will involve the opportunity to supervise postgraduate students and participate in teaching at undergraduate and postgraduate levels.

The appointment will be for a fixed term period of 5 years. Any further employment will be dependent on securing funds beyond the initial 5 year period. An attractive remuneration package will be negotiated, including generous superannuation, study leave with travel assistance after three years, long service leave, fares to Perth for the appointee and dependants and an allowance towards removal expenses. In addition, a launching grant will be available.

Further information concerning the position and selection criteria can be obtained from Mr R Mattaboni, Human Resources, on telephone: +61 8 9380 3541 or confidential fax: +61 8 9380 1036 or email: rmattaboni@acs.uwa.edu.au. Further information concerning the Chair may be obtained from Professor L Beilin, Head of the University Department of Medicine on telephone: +61 8 9224 0258 or fax: +61 8 9224 0246 or email: lbeilin@cyllene.uwa.edu.au.

Applications including a statement addressing the selection criteria and full curriculum vitae stating name, address (home and work), qualifications and experience, should reach the Director Human Resources, The University of Western Australia, Nedlands, WA 6907, Australia, by 1 December 2000. The names, addresses, facsimile and email addresses of three referees should also be included with the application.

The University reserves the right to make no appointment or to fill the Chair by invitation. http://jobs.uwa.edu.au/

The University is an equal opportunity employer and promotes a smoke-free work environment

GEOMICROBIOLOGIST: The Department of Geology, University of Illinois at Urbana—Champaign, invites applications for a full-time (nine-month) tenure-track faculty position beginning fall semester 2001. We seek an outstanding candidate in microbial geoscience or an allied field concerned with the activities and significance of microbes in Earth systems, ancient or modern. Specific areas of interest might include (but are not limited to) environmental microbiology, biomineralogy, biogeochemistry, and molecular microbiology. The candidate is expected to develop and maintain an active program of research and teaching at the graduate and undergraduate levels. We expect to fill this position at the ASSISTANT PROFESSOR level. Salary will be commensurate with qualifications. An earned Ph.D. degree is required.

The University of Illinois maintains a broad and active program in geomicrobiology through the Departments of Geology, Microbiology, Civil and Environmental Engineering, Natural Resources and Environmental Sciences, Biochemistry, and the State Geological and Water Surveys. The Department is constructing a suite of state-of-the-art laboratories for biogeologic research; a broad array of fully equipped and staffed analytical and sequencing facilities exists on campus.

For equal consideration, an interested individual should submit his or her curriculum vitae, list of publications, statement of research and teaching interests, and the names and addresses of at least three references to the Search Committee by December 4, 2000. All materials should be addressed to: Professor Craig Bethke, Search Committee Chair, Department of Geology, University of Illinois, 1301 West Green Street, Urbana, IL 61801 U.S.A. Telephone: 1-217-333-3369; e-mail: c-bethke@uiuc.edu.

University of Illinois is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

WILDLIFE ECOLOGIST

We seek a scholar/teacher with an extramurally fundable research program to fill a tenure-track AS-SISTANT PROFESSOR position. Responsibilities include teaching undergraduate and graduate courses in wildlife biology and professional involvement with wildlife biology undergraduates. By 15 December 2000, please submit a letter describing research and teaching interests; curriculum vitae; three representative publications; and the names, addresses, telephone numbers, and e-mail addresses of three references to:

Dr. Eric Hellgren, Chair Wildlife Ecology Search Committee Zoology Department Oklahoma State University 430 Life Sciences West Stillwater, OK 74078-3052

For addition information, contact: Search Committee Chair; Telephone: 405-744-9671; FAX: 405-744-7824; website: http://zoology.okstate.edu. Oklahoma State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

EUKARYOTIC CELL BIOLOGIST

The Department of Biology at Southwest Missouri State University invites applications for a tenure-track ASSISTANT PROFESSOR position in cell biology. Requirements include a Ph.D. degree, teaching and research experience, and a record of publication in eukaryotic cell biology. Duties include teaching cell and introductory biology, research and publication, and advisement of B.S. and M.S. students. Starting date is August 13, 2001. Applications should include curriculum vitae; statements of teaching and research interests; and the names, addresses, telephone numbers, and e-mail addresses of three references to: Dr. John Havel, Chair, Cell Biology Search Committee, Department of Biology, Southwest Missouri State University, Springfield, MO 65804-0095. Telephone: 417-836-5308; FAX: 417-836-4204; e-mail: johnhavel@smsu.edu; website: www.smsu.edu. Review of applications will begin on November 1, 2000. Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

STAFF SCIENTIST POSITION

Schleicher & Schuell, Inc., a leading manufacturer of polymeric surfaces for the diagnostics and biomedical research markets, has a Staff Scientist position available in the Research and Development group. Located in the company headquarters of Keene, New Hampshire, the position is open for immediate placement.

Reporting to a senior scientist, this entry-level position requires a Ph.D. in biochemistry or bioorganic chemistry. Postdoctoral experience is desirable but not required. The ideal candidate will have experience with surface chemistry relating to the immobilization of biomolecules and/or synthesis of labeling reagents for biomolecules. Familiarity with membrane chemistry would be considered a plus. Responsibilities will include development of novel technologies leading to new products as well as interaction with process development.

If you meet these qualifications and desire to join a professional team and work for a company offering a competitive wage with an excellent comprehensive benefit package, including 13 paid holidays, health and dental insurance, tuition reimbursement, company-paid short- and long-term disability, 401(k), profit sharing, and a bonus plan, please forward your résumé and wage requirements to:

Human Resources Manager Schleicher & Schuell, Inc. P.O. Box 2012 Keene, NH 03431 FAX: 603-355-6516 E-mail: hrdepts@-and-s.com

An Equal Opportunity Employer.

TROPICAL MARINE SCIENTIST SMITHSONIAN

The Smithsonian Tropical Research Institute has a position available for a Marine Scientist working in any aspect of tropical marine biology or geology. The successful candidate will be expected to help develop the Institute's Caribbean marine station at Bocas del Toro, located within one hour's flight northwest of Panama City, Panama. STRI is building a modern biological station at Bocas del Toro for the use of resident and visiting Scientists as well as students. All branches of marine science will be considered, but a candidate with a program of field research that involves the extensive coral reef/seagrass/mangrove ecosystems in the region or the richly fossiliferous Neogene marine sequences will be preferred. Qualified persons should submit a statement of research; complete curriculum vitae; and addresses, telephone numbers, and e-mail addresses of five references. Review of application will begin on 15 November 2000 and will continue until the position is filled. Send applications to: Mrs. Luz Latorraca, Office of Human Resources, STRI, Unit 0948, APO AA 34002, U.S.A. Telephone: +01-202-786-2099, extension 8094 (U.S.A.); FAX: +507-212-8150 (Panama); e-mail: latorrac@tivoli.si.edu. For additional information about STRI, please consult website: http://www.stri.org. The appointment will be made without consideration of nationality, creed, race, or gender.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE positions are available immediately to study in the area of lipid modification and calmodulin regulated systems. Applicants should have a Ph.D. in area of biochemistry or molecular biology; experience in protein purification, characterization, cloning, and expression required. Knowledge and experience in the area of protein myristoylation, calmodulin, protein kinases, and phosphodiesterase preferred. Apply with updated curriculum vitae with three letters of recommendation to:

Dr. R.K. Sharma, Department of Pathology University of Saskatchewan Saskatoon Cancer Centre 20 Campus Drive Saskatoon, Saskatchewan S7N 4H4 Canada FAX: 306-655-2635

POSITIONS OPEN

RESEARCH SCIENTIST, Aventis Pharmaceuticals, Gencell Division, 3825 Bay Center Place, Hayward, California: Design and carry out in vitro assays to evaluate the biological activities of recombinant viruses, establish animal models of human cancers and evaluate the efficacy of therapeutic candidates in development, perform animal surgery to establish clinically relevant models for testing the efficacy of therapeutic candidates, establish assays to assess the tumorspecific immune responses induced by the immuno gene therapies, initiate and conduct research for developing novel cancer gene therapies in established in-house models and/or in collaboration with academic and contract organizations, and perform statistical analysis of the experimental data and preparation of scientific reports and preparation of scientific manuscripts. Must demonstrate expertise in immunology, tumor biology, cancer, immunotherapy, and gene therapy and have experience in mammalian cell culture, primary T cell and dendritic cell cultures, immunological assays, in vivo tumor and surgery models, molecular biology techniques, and vectorology. Must possess Ph.D. in immunology and two years of experience in job offered or as immunologist specializing in cell immunology in pharmceutical industry. Forty hours per week; salary \$79,000 per year. Please submit résumé to Box Number 92, 1200 New York Avenue, Room 914, Washington, DC 20005.

ASSISTANT PROFESSOR OF BIOCHEMISTRY UNIVERSITY OF WASHINGTON

Applications are invited for a tenure-track Assistant Professor position in the Biochemistry Department of the University of Washington Medical School. We are interested in applications from creative individuals who have strong research credentials and plan to focus on molecular aspects of important biological problems. Applicants should have a Ph.D. in biochemistry, molecular biology, or a related field. The appointee will be expected to participate in interdisciplinary graduate training programs and undergraduate teaching. Applicants should submit curriculum vitae, a research prospectus, reprints/preprints, and three letters of recommendation to be forwarded separately by December 1, 2000, to: Alan Weiner, Chair, Department of Biochemistry, University of Washington, Seattle, WA 98195-7350. Telephone: 206-543-4985; FAX: 206-685-9231; e-mail: amweiner@ u.washington.edu. The University of Washington is building a culturally diverse faculty and strongly encourages applications from female and minority candidates. The University of Washington is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS

Postdoctoral positions are available to study regulation of protease gene expression in cancer (website: http://www.mdanderson.org/depts/cancerbiology/faculty/boyd.html). Emphasis will be on investigations of in vivo gene transcription using transgenic mice, genomic footprinting, and chromatin immunoprecipitation. Candidates should submit their curriculum vitae by e-mail: dboyd@mdanderson.org or hard copy to: Dr. Douglas Boyd, Department of Cancer Biology, Box 179, M. D. Anderson Cancer, 1515 Holcombe Boulevard, Houston, TX 77030 U.S.A. The University of Texas M. D. Anderson Cancer Center is an Equal Opportunity Employer.

POSTDOCTORAL POSITION to study biochemistry and cell biology of the polycystic kidney disease gene products and transient receptor potential channel proteins (PNAS 94:6965, 1997; PNAS 96: 3934, 1999). Expertise in one or more of the following areas is highly desirable: molecular biology, protein biochemistry, or immunofluorescence staining/confocal microscopy. Interested candidates should send curriculum vitae, including the names and addresses of three references, to: Leo Tsiokas, Ph.D., Department of Cell Biology, BSEB 302E, The University of Oklahoma Health Sciences Center, 941 S. L. Young Boulevard, Oklahoma City, OK 73104. E-mail: leonidas-tsiokas@ouhsc.edu.







BIOPROCESSING TECHNOLOGY CENTRE

DIRECTOR

The National Science and Technology Board (NSTB) and National University of Singapore (NUS) invite applications for the Director of the Bioprocessing Technology Centre (BTC).

BTC

Established in 1990, BTC executes a comprehensive research and development programme with the aim of developing technological capabilities in strategic areas of bioprocessing, to support the growth of a vibrant biopharmaceutical industry in Singapore. It especially acts as the 'bridge' between discovery and commercialisation.

To this end, BTC develops core competence with commercial applications in critical technology areas, working with industry, as well as centres of relevant expertise. BTC aims to develop the technology for next-generation biopharmaceuticals, expand present markets and create new industries and commercial opportunities.

BTC's core expertise is in the areas of BioProcessing (Expression Systems, Cell Culture, Microbial Fermentation, Product Purification), Applied Molecular Biology, and Technology Development (DNA/Peptide, Proteomics). The Centre's activities span across Research and Development (with emphasis on joint development applied projects), Custom Services and Incubator Management. It is in the midst of building a cGMP biopilot production facility to provide biopharmaceutical manufacturing capability to industry.

RESPONSIBILITIES

The Director serves as the Chief Executive Officer for BTC, with about 80 staff. He/She is responsible for the continued progress of Research and Development programmes at the Centre through interaction with the industry, universities and other research institutes and centres, for it to achieve recognition as a key R&D element in the growth and development of the life science industry in Singapore. In addition to leadership, management and administrative responsibilities for the operation of the Centre, the Director is expected to develop a research culture that gives high priority to R&D collaboration with the industry, innovation and education.

OUALIFICATIONS AND REMUNERATION

Applicants should have proven track record of research and industry experience. We seek a person with exceptional vision, commitment, energy and leadership skills who will enthusiastically coordinate industry, faculty and administration efforts in maintaining and growing the research programmes in the Centre for the benefits of the industry. He/She should have effective communication skills, with the ability to interact well at all levels. A demonstrated record of successful business start-ups with strong emphasis on technology and intellectual asset generation and exploitation is preferred. The successful applicant must have experience with large grant management and demonstrated expertise in working with science and technology programmes including planning, management, budget, communications and organizational skills. The salary will commensurate with experience and qualifications.

APPLICATIONS

The Search Committee will review the applications starting 27 September 2000 and continue until the position is filled. Applicants are requested to send their curriculum vitae and arrange for three letters of recommendation to be forwarded to:

Dr Francis Yeoh Assistant Managing Director (Technology Infrastructure) National Science and Technology Board 10 Science Park Road, #01-01/03 The Alpha Singapore Science Park II, Singapore 117684 Fax: (65)-7794598

For further inquires on the position, please contact e-mail to: Director_Search@nstb.gov.sg

POSITION AVAILABLE: ASSISTANT SCIENTIST IN MRI/S AMRIS Facility, McKnight Brain Institute, University of Florida

The Advanced Magnetic Resonance Imaging and Spectroscopy (AMRIS) facility, located in the McKnight Brain Institute (MBI) at the University of Florida, seeks an ASSISTANT SCIENTIST primarily to support its 4.7 Tesla/33cm and 11.7 Tesla/40cm magnet systems in the MR laboratories. The facility also houses 500 and 600 MHz instruments and a 750 MHz wide-bore imager/spectrometer. The position is available immediately.

The AMRIS facilities are used on a fee-paying basis by researchers from many colleges and departments across the University of Florida campus and by external users. The facility operates as a national resource as part of its partnership with the National High-Magnetic Field Laboratory (NHMFL) in Tallahassee. The successful candidate will join a multidisciplinary team in the day-to-day running and maintenance of the MR instruments, both participating in the research projects and providing service and developing new research projects.

A Ph.D. candidate in the physical or biological sciences with previous MR experience is required. Salary is negotiable and will be commensurate with education and experience.

For information, contact: Dr. Steve Blackband; e-mail: blackie@ufbi.ufl.edu; Telephone: 352-846-2854. To apply, please send curriculum vitae (e-mail attachment or FAX to: 352-392-3422) and the names of three references or write to: Dr. S. Blackband, Department of Neuroscience, University of Florida, P.O. Box 100244, Gainesville, FL 32610. Application due by October 14, 2000, with an anticipated start date of October 23, 2000. The University of Florida is an Equal Opportunity Employer; minorities and women are especially encouraged to apply.

STAFF SCIENTIST/ECONOMIST FOREST ECOSYSTEM SERVICES

National nonprofit organization seeks individual to develop and implement analytic, policy, and outreach activities aimed at strengthening forest conservation and sustainable land use through policies and measures capturing the values of carbon sequestration and other ecosystem services. A priority focus will likely be on identifying and promoting ecologically sound policies and measures to reduce carbon emissions from forests and land use through targeted research, outreach, and policy advocacy. Position requires Master's or Doctorate in ecology, resource economics, forestry, or related field: a minimum of three to five years of relevant experience; strong project management experience; excellent communication skills; and experience in translating technical information for nonspecialist audiences. Working knowledge of scientific and policy aspects of climate change and the role of forests and land use in climate change mitigation strongly preferred. Competitive salary and benefits. Review of applications begins 20 October 2000. More information at website: http://www.ucsusa.org. Send cover letter, curriculum vitae, writing sample, and names of three references to: Director, Global Resources, Union of Concerned Scientists, 2 Brattle Square, Cambridge, MA 02238-9105. Union of Concerned Scientists is an Equal Opportunity Employer continually seeking to diversify its staff.

Two POSTDOCTORAL POSITIONS are available in the laboratory of Biophysics and Cellular Physiology at New England Medical Center/Tufts University, one to study the cellular mechanisms by which Ca²+-activated K+ channels (BK_{Ca}) are regulated in vascular smooth muscle and the other to study the molecular mechanisms by which auxiliary (β) subunits alter BK_{Ca} channel function. Experience with electrophysiological or molecular biological techniques is desired. Send curriculum vitae, visa status, and references to: Daniel H. Cox, Ph.D., MCRI, NEMC, Box 7868, 750 Washington Street, Boston, MA 02111. E-mail: dcox01@emerald.tufts. du. New England Medical Center is an Equal Opportunity Employer.

POSITIONS OPEN



Axiom Biotechnologies Inc. is a biotechnology company, and we have several openings for talented team-oriented Researchers with broad scientific experience and exceptional communication skills to take responsibilities in diverse research projects.

STAFF SCIENTIST (0901): Qualifications: Ph.D. in pharmacology or cell biology and five years of post-doctoral experience with a demonstrated track record of accomplishments. You will be responsible for pharmacological profiling and evaluation of biologically active compounds using cell-based assays on proprietary HT-PS 100 system. Hands-on experience in receptor and ion channel pharmacology is a must, firm knowledge of fluorescence is essential, and knowledge of signal transduction mechanisms will be helpful.

STAFF SCIENTIST (0902): Qualifications: Ph.D. or M.S. in biochemistry, biophysics, or cell biology and at least two years of postdoctoral or three years of industry experience. You will be responsible for development of cell-based assays utilizing proprietary HT-PS 100 system. Hands-on skills in method development and firm knowledge of fluorescence and fluorescent dyes used for detecting changes in cell physiology is required. Hands-on experience in electrophysiology for ion channels is also preferable.

RESEARCH ASSOCIATE (0903): Qualifications: B.S./M.S. and at least three years of relevant laboratory/industry experience are required.

You will assist Scientists in developing new assays using proprietary HT-PS systems and performing pharmacological profiling of chemical libraries. Experience in tissue culture, molecular biology, and assay development will be essential for your success. E-mail your résumé to: Ilathrop@axiombio.com or FAX: 858-455-4494; website: www.axiombio.com. Equal Opportunity Employer.

ASSISTANT PROFESSOR POSITIONS AVAILABLE Conservation Biologist and Animal Physiologist/Cell Biologist

The Biology Department at SUNY College at Geneseo, a public liberal arts college in western New York, seeks applicants for two tenure-track positions: (1) a Conservation Biologist to teach either general or nonajors biology and laboratories, behavior, and a course in their area of expertise; and (2) an Animal Physiologist/Cell Biologist to teach animal physiology, either general biology or nonmajors biology and laboratories, and a course in their area of expertise. Preferred specialties include but are not restricted to endocrinology, cell signaling, cell motility, or biophysics.

Candidates will be expected to implement a research program that involves undergraduates. A Ph.D. degree in biology or closely related field is required. Teaching and/or postdoctoral experience is preferred.

Applicants should submit curriculum vitae, a statement of teaching philosophy and goals, a statement of research interests that includes undergraduate students, up to three relevant reprints, transcripts, and three recent letters of recommendation to:

Dr. Ray Spear, Chair Biology Department Bailey 106 SUNY Geneseo 1 College Circle Genesco, NY 14454

Review of applicants' materials will begin on November 8, 2000, for the Conservation Biologist and on December 1, 2000, for the Animal Physiologist. Geneseo is an Affirmative Action/Equal Opportunity Employer. Women and minorities are strongly encouraged to apply.

POSITIONS OPEN

The Ohio State University announces its search for the DIRECTOR OF THE HEART AND LUNG RESEARCH INSTITUTE (HLRI). The HLRI is centrally located on the main campus of The Ohio State University proximal both to the Health Sciences Center and to all schools and colleges at the University.

A unique opportunity exists for this individual to establish excellence in cardiovascular research in a comprehensive academic medical center. This individual will engage both basic and clinical Scientists with a broad range of research interests in translational research focused upon cardiopulmonary diseases. Through the leadership of the new HLRI director, Investigators at the University will embark on a mission to improve the outcome of patients with heart and lung diseases. An enormous advantage of working at Ohio State is direct access to extensive scientific and clinical resources within the respective Colleges of Medicine and Public Health, Engineering, Veterinary Medicine, Nursing, Dentistry, Pharmacy, and Basic Biological Sciences. Few campuses nationally can boast of the collaborative spirit that exists at Ohio State. This spirit is enhanced by the proximity to all resident scientific expertise within these disciplines. The HLRI encompasses 80,000 square feet of new

The HLRI encompasses 80,000 square feet of new research space. Adjacent to the HLRI will be the new Ohio State University Heart Hospital. The establishment of these two highly interactive facilities will further enhance translational research opportunities in cardiopulmonary diseases and lead to novel diagnostic and therapeutic interventions. New programs in cardiovascular bioengineering are also being supported through selective investment funds that will further enhance collaboration between these research units.

The HLRI Director must stimulate and cultivate interactions within the clinical departments and basic science teams working within the various academic units of the University (i.e., Departments of Internal Medicine and Surgery, Department of Radiology, School of Public Health, respective Colleges of Engineering and Pharmacy, etc.). This scholarly individual should be highly successful in obtaining peer-reviewed funding and have an established record of training academic physicians and Investigators. The HLRI Director should chart an innovative course of leadership that will culminate in this University being recognized as the premier institute for research, education, and treatment of heart and lung disease.

While a distinguished record of academic achievement is absolutely required, the Director will also need the personal skills necessary to recruit and mentor outstanding new students and faculty. This individual will develop unique research programs incorporating highly technical clinical services and products of importance to the citizens of Ohio. Previous experience in academic administration will be required to manage the enormous resources being committed to this position. In addition to the Directorship, the successful candidate should possess the academic credentials (M.D. or Ph.D.) to qualify as a **TENURED PROFESSOR** in one of the academic departments of the College of Medicine and Public Health.

The successful candidate will report to Fred Sanfilippo, M.D., Ph.D., Senior Vice President of the University for Health Sciences and Dean of the College of Medicine and Public Health.

Interested candidates should send a letter of interest, curriculum vitae, and the names of four to five individuals who will serve as endorsers and references. Materials should be clearly marked with "HLI Candidate" and sent to: Michael Grever, M.D., Chair, The Department of Internal Medicine, Charles A. Doan Professor of Medicine, 215 Means Hall, 1654 Upham Drive, Columbus, OH 43210. OSU is an Equal Opportunity Employer.

BIOINFORMATICS SCIENTIST to analyze gene expression data from the microarray system and protein chips in health and diseased state. Candidates with previous experience in bioinformatics, computer programming, and an interest in biology are encouraged to apply. Salary commensurate with experience. Résumés to e-mail: Pamela Lingeman@urmc.rochester.edu. Socratech University of Rochester (New York) is an Equal Opportunity Employer.

MOLECULAR NEUROBIOLOGY Tenure Track Faculty Position Bowdoin College

The Biology Department of Bowdoin College seeks to fill a tenure track position in Molecular Neurobiology at the Assistant Professor level beginning Fall 2001. The position involves a joint appointment in biology and the interdisciplinary neuroscience program. Teaching responsibilities will normally be 3 courses with labs per year, including a lower level course that covers material at both the cell/molecular and organismal levels of organization and an upper level course in the candidate's area of specialization. The successful applicant is expected to maintain an active research program involving undergraduates. Postdoctoral experience preferred.

Review of applications will begin October 15, 2000. Please send a CV, a letter of intent which includes a description of research interests and teaching philosophy, and have three letters of reference sent directly to: Dickinson, Chair, Biology Department, Neuroscience Search, 6500 College Station, Bowdoin College, Brunswick, ME 04011-8465. For further information about the college and the department, please see our website: www.bowdoin.edu.

Bowdoin College is committed to Equal Opportunity through Affirmative Action. Women and minorities are encouraged to apply.

Workshops

The Science of the

Toward an Interdisciplinary Research Agenda

November 19-21, 2000

National Institutes of Health Bethesda, MD



A Trans-NIH/DHHS Workshop

Co-chairs: **Arthur Kleinman, Harry Guess**

Definition and History:

Anne Harrington, Ted Kaptchuk, Robert Rose

Social/Cultural Aspects:

Thomas Csordas, Robert Hahn, Daniel Moerman

Behavioral Aspects:

Robert Ader, Richard Bootzin, Irving Kirsch, Shepard Siegel

Biological Aspects:

Gerald Fischbach, Steven Hyman, **Donald Price**

Implications for Clinical Trials:

Rob Califf, Edward Davis, John Eisenberg, Stuart Pocock, Frank Rockhold, Kenneth Rothman, Robert Temple, Janet Wittes

Ethical Aspects:

Sissela Bok, Howard Brody, Robert Levine

Breakout Group Chairs:

Fabrizio Benedetti, Susan Czjakowski, David Feigal, Cheryl Kitt, Lisa Onken, Kathleen Propert, Claus Roehrborn, David Spiegel, Michael Stefanik, Esther Sternberg, David Wendler

Registration deadline is October 27, 2000 and is limited to 500 participants. For registration and information, see http://placebo.nih.gov">or contact Maria Smith (301i315-9000 or piacebo@tascon.com).

UNIVERSITY of LOUISVILLE,

dare to be great

Endowed Chair in CNS Injury Research

The Kentucky Spinal Cord Injury Research Center at the University of Louisville School of Medicine is looking for a new faculty member at the Associate or Full Professor level. The candidate's research focus should complement existing programs in CNS injury and regeneration, neural precursor cells and spinal cord motor systems. The successful applicant will be an internationally recognized leader in his/her field, with a strong history of publication, funding and scientific accomplishment. The position will have a primary appointment in the Department of Neurological Surgery at the University of Louisville School of Medicine with a joint appointment in an appropriate basic science department. The Endowed Chair represents a commitment on the part of the University of Louisville and the Kentucky Spinal Cord and Head Injury Research Trust to building a strong research program in CNS injury. Applications should be received by October 8, 2000, and should include a curriculum vitae and a summary of research accomplishments and future directions. The University of Louisville is an equal opportunity employer.

Send applications to: Christopher B. Shields, M.D., Chairman Department of Neurological Surgery 210 E. Gray St., Ste. 1102 Louisville, KY 40202

GLOBAL OPPORTUNITIES

THE UNIVERSITY OF HONG KONG



The University of Hong Kong is one of the leading international comprehensive research universities in the Asia-Pacific region, with more than 100 departments and sub-divisions of studies and learning. There is currently an enrolment of more than 15,000 students (6,000 at postgraduate level). Research students come from more than 40 countries. The medium of instruction is English. The University is committed to its vision of globalisation, together with excellence in scholarship and research.

Post-doctoral Fellow in the Department of Medicine

Applications are invited for appointment as Post-doctoral Fellow in the Department of Medicine (Ref: RF-2000/2001-69), tenable from as soon as possible. The appointment will be made for a period of two years.

The Department of Medicine aims to produce doctors equipped to practise medicine of the highest standard and in the best interests of their patients and the community, and to inspire them to strive for and achieve academic excellence.

Applicants should possess a PhD degree in biochemistry, immunology, molecular biology or a related discipline. Experience using experimental techniques in molecular biology, B cell immortalisation and signal transduction is an advantage. The appointee is required to study B cell signal transduction in autoimmune disorders.

Annual salary is on a 4-point scale, with starting salary depending on qualifications and experience: HK\$369,420 - HK\$486,000 (approx. US\$47,359 - US\$62,305; US dollar equivalents as at 11 September 2000). The appointment carries leave, medical and dental benefits, and an allowance for children's education in Hong Kong.

Further particulars and application forms can be obtained at http://www.hku.hk/apptunit/; or from the Appointments Unit (Senior), Registry, The University of Hong Kong, Hong Kong (Fax (852) 2540 6735 or 2559 2058; E-mail: apptunit@reg.hku.hk). Closes 20 October 2000.

The University is an equal opportunity employer and enjoys a smoke-free environment

POSTDOCTORAL POSITION FOR VACCINE PROJECT

A Postdoctoral position is available immediately in the Department of Surgery at the Medical University of South Carolina. The project involves the character ization of antigen-specific T cell responses in antitumor immunity. We have established a model based on the adoptive transfer of T cells from TCR transgenic mice. We are currently using this model to explore the rational development of a novel vaccine delivery system. The candidate will be expected to develop expertise in all aspects of cellular and molecular immunology including but not limited to tissue culture, flow cytometry, cytotoxicty and proliferation assays, and animal husbandry. Prior experience in these fields is preferred. The applicant is expected to have obtained a recent Ph.D. degree in immunology or related field and will work in a team environment. Please send your curriculum vitae to: William E. Gillanders, P.O. Box 250613, Charleston, SC. Telephone: 843-792-1387; e-mail: gillanwe@musc.edu. Required minimum education and experience: Ph.D. degree in immunology or related field.

POSTDOCTORAL POSITION MOLECULAR BIOLOGY OF THE CHEMOKINE SYSTEM

The laboratory investigates the chemokine system in lymphocyte biology with respect to inflammation, host defense, and HIV infection using human cells and experimental models in mice as appropriate. A postdoctoral position is available focusing on molecular studies of novel receptors, including mechanisms of gene regulation and the identification of polymorphisms associated with human disease. A Ph.D. and/or M.D. and a background in molecular biology is required. Candidates must have less than five years of relevant postdoctoral experience. An interview is mandatory. Contact: Joshua M. Farber, M.D., Laboratory of Clinical Investigation, Building 10, Room 11N–228, 10 Center Drive, MSC 1888, Bethesda, MD 20892-1888. Telephone: 301-402-4910; FAX: 301-402-0627; e-mail: joshua_farber@nih.gov. Applications will be accepted until November 1, 2000. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION TUFTS UNIVERSITY SCHOOL OF MEDICINE

A position is immediately available to conduct a high-throughput functional screen for proteins required for cancer cell invasion. Applicants must have a strong background in cellular assays, cancer biology, or automation of functional screens. Please send curriculum vitae and three references by October 15, 2000, to:

Professor Daniel Jay
Department of Physiology
Tufts University School of Medicine
136 Harrison Avenue
Boston, MA 02111
E-mail: Daniel.jay@tufts.edu

Tufts University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS

Postdoctoral positions open in Terumi Kohwi-Shigematsu's laboratory to study how a cell-type specific protein orchestrates multiple genes to ensure proper cell development and apoptosis (Genes and Dev. 14:521–535, 2000). Traning in molecular biology is essential; background in immunology, neurobiology, spermatogenesis, bone development, or stem cell development is preferred. Send curriculum vitae and three references to: Biosciences Human Resources Center, Lawrence Berkeley Laboratory, University of California, One Cyclotron Road, MS Donner, Berkeley, CA 94720. Please cite Job LS/012647/JS in your cover letter. Berkeley Laboratory is an Affirmative Action/Equal Employment Opportunity Employer.

POSITIONS OPEN

SCIENCE WRITER IN RESIDENCE UNIVERSITY OF ARIZONA

The University of Arizona is looking for a Science Writer in residence for spring 2001 from approximately January 3 to May 30, 2001. Science writer will work with journalism and science students and faculty and will teach two classes. Minimum qualifications are Bachelor's degree in journalism or one of the sciences and two years of experience covering science tonics.

The University of Arizona will provide a \$30,000 salary, \$1,500 in relocation expenses, and \$1,500 research stipend. Applications will be reviewed starting October 15, 2000, until position is filled. Send letter of interest, résumé, and three to five clips to: Professor Jacqueline Sharkey, University of Arizona, Journalism Department, P.O. Box 210080, Tucson, AZ 85721-0080. Send inquiries to e-mail: sharkey@u.arizona.edu.

PROTEOME INC.

Proteome Inc. is a rapidly growing company at the forefront of the bioinformation revolution that provides comprehensively curated protein databases to the pharmaceutical industry and to academia. All positions have the opportunity to advance to positions of greater responsibility in an exciting work environment. See website: http://www.proteome.com. SCIENTIFIC CURATORS: Multiple opportu-

SCIENTIFIC CURATORS: Multiple opportunities exist for Scientific Curators, who collect and integrate protein information for our multispecies databases. Candidates must have training in mammalian or model systems, a wide knowledge of cell biology or related fields, excellent writing skills, and a Ph.D. Curators may work full- or part-time, on-site or remotely, which offers maximum personal flexibility.

motely, which offers maximum personal flexibility. PROJECT SCIENTISTS/SCIENTIFIC PROGRAMMERS: Multiple full-time opportunities exist on-site for Biological Scientists to become part of Proteome's research group. Candidates will develop new approaches and tools for gathering information for Proteome's integrated databases. Demonstrated ability to rapidly assimilate and apply new information is critical. Previous training in mammalian or model systems, excellent writing skills, or experience with a programming or scripting language (PERL, Python, Iava, IavaScript, C. C++, etc.) is preferred.

Java, JavaScript, C, C++, etc.) is preferred.

QA/QC: Multiple full-time opportunities exist on-site relating to quality assurance and quality control. Candidates will act as a companywide resource for defining and monitoring the accuracy and consistency of Proteome's databases and must be able to communicate and work well with others. Candidates must have training in mammalian or model systems, a wide knowledge of cell biology or related fields, excellent writing skills, and a Ph.D. Previous training in programming languages and/or in QA/QC is preferred.

Please send a cover letter and curriculum vitae to e-mail: hr@proteome.com or to: Human Resources, Proteome Inc., 100 Cummings Center, Suite 435M, Beverly, MA 01915. See website: www.proteome.com for more information. An Equal Opportunity Employer.

MEDICAL WRITERS

Leading medical education company based in New York City has an immediate opening for Medical Writers. Familiarity with development of biological/biomedical sciences manuscripts required. Ph.D. or advanced degree in the biological sciences preferred. The ability to write clearly and concisely is essential. You will be expected to work on your own initiative and interface with physicians, clients, and program directors. Some travel may be required. Please send résumé to: Harrison & Star Business Group, Human Resources Department, 12th Floor, 16 West 22nd Street, New York, NY 10010. FAX: 212-822-6693; e-mail: jobs@hsci.com; Attention Medical Writers.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP EVOLUTIONARY FUNCTIONAL GENOMICS

University of Florida Genetics Institute

Postdoctoral position available October 1, 2000. Our laboratory is using DNA microarrays to investigate on a genomewide basis evolutionary responses of yeast to resource limitation (e.g., PNAS (USA) 96: 9721). We seek a broadly trained individual having demonstrated expertise in one or more of the three general areas: molecular biology, bioinformatics, and evolutionary genetics who is committed to an integrated approach to the study of evolution. The appointment will be made within Florida's new Genetics Institute and will be for two years contingent upon successful review in the first year. Salary will range from \$27,000 to \$32,000 per year plus full benefits. Visit website: http://www.mgm.ufl.edu for information on resources in the University of Florida College of Medicine. Send short e-mail of introduction (e-mail: rrosenzw@mgm.ufl.edu) followed by a letter of application that includes a statement of your background, your research goals and philosophy, relevant research publications, and curriculum vitae. Please provide contact information for three references. Position open until filled with a first review of materials beginning September 15, 2000. Apply to: Dr. Frank Rosenzweig, University of Florida, Department of Molecular Genetics and Microbiology, Gainesville, FL 32610-0266. The University of Florida is an Equal Employment Opportunity/Affirmative Action Employer; Minorities/Women/Disabled/Veterans.

ECOTOXICOLOGIST

We seek a scholar/teacher with an extramurally fundable research program to fill a tenure-track AS-SISTANT PROFESSOR position. Responsibilities include teaching undergraduate and graduate courses that depend on the successful applicant's field of specialty. Of particular interest are individuals with research and teaching experience in developmental biology. By 15 December 2000, please submit a letter describing research and teaching interests; curriculum vitae; three representative publications; and the names, addresses, telephone numbers, and e-mail addresses of three references to:

Dr. Roman Lanno, Chair Ecotoxicologist Search Committee Zoology Department Oklahoma State University Stillwater, OK 74078-3052

For addition information, contact: Search Committee Chair; 405-744-5551; FAX: 405-744-7824; website: http://zoology.okstate.edu. Oklahoma State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

POSTDOCTORAL POSITIONS The Burnham Institute in La Jolla Genomics and Proteomics to Dissect Tumor Progression

Postdoctoral positions are available for individuals interested in using biochemical profiling strategies to gain insight into the mechanisms of tumor progresion. Projects focus on applying a three-tiered profiling strategy to understand the multiple changes that drive tumor progression. The strategies include cDNA array analysis, the use of antibody phage display, and activity-based proteomics. Topics of interest include regulation of tumor growth, mechanisms of organ-specific metastasis, and hypoxia and redox in tumor biology. Individuals with expertise in molecular or cell biology or protein biochemistry are encouraged to apply. A publication record will be taken as evidence of potential. Positions require a Ph.D.

Send curriculum vitae, relevant reprints, and the names of three references to: Jeffrey W. Smith, Ph.D., Associate Professor, The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037. E-mail: jsmith@burnham.org.



Department of Computer Science School Of Biological Sciences

CHAIR IN BIOINFORMATICS

REF: 749/00

LECTURESHIP IN BIOINFORMATICS

REF: 750/00

The Department of Computer Science and the School of Biological Sciences at the University of Manchester seek applications for a Research Councils funded Chair in Bioinformatics, and for an associated lectureship. The University already has a strong collaborative research activity in Bioinformatics, and with the support of the UK Research Councils, is seeking to grow and strengthen that activity, specifically in the area of Post-Genomic Bioinformatics.

The Chair: The appointee will be expected to establish and lead collaborative research activities that bring advanced computational techniques to bear on problems involving information management, analysis and visualization, specifically in the context of genomic data. It is anticipated that the appointee will have an international reputation for work in bioinformatics, and will possess skills that complement those of people currently working at Manchester. The salary will be negotiable from £37,500 p.a.

The Lectureship: The appointee will be expected to bring computational skills of relevance to post-genomic bioinformatics. Specifically, applicants with experience of statistical modelling, machine learning and information visualization are particularly encouraged to apply, but these topics should not be considered as excluding other relevant areas. The salary will be in the range £18,731 - £23,256 or £24,227 - £30,967 p.a.

Informal enquiries can be made to Prof. Norman Paton. Tel: +44 (0)161 275 6910; E-mail: norm@cs.man.ac.uk or Prof. Steve Oliver. Tel: +44 (0)161 606 7260; E-mail: steve.oliver@man.ac.uk

Application forms and further particulars are available from the Office of the Director of Personnel, The University of Manchester, Oxford Road, Manchester M13 9PL.Tel: +44 (0)161 275 2028; Fax: +44 (0)161 275 2471; Minicom (for the hearing impaired): +44(0)161 275 7889; E-mail: personnel@man.ac.uk Web Site: http://www.man.ac.uk

Closing date: 27 October 2000. Please quote appropriate reference number.

As an Equal Opportunities
Employer, the University
welcomes applications from
suitably qualified people
from all sections of the
community regardless
of race, religion, gender
or disability.

Max Planck Institute

for Evolutionary Anthropology



The Max Planck Institute for Evolutionary Anthropologyin Leipzig, Germany, offers the position of:

Head of an Independent Junior Research Group

The position is a fulltime research position, and has associated with it funds for conducting research – including positions for a second **Ph.D.scientist** (BAT IIa) and two **technical assistants**. The appointment will be for a term of five years. The institute has four departments, including the Department of Primatology (Christophe Boesch, Director). More information may be obtained at https://www.eva.mpg.de/.

Research interests should focus on the evolution of culture and social learning in animals, except for great apes which are covered by the already existing departments of the institute. For example: Behavioural and cultural differences between populations and species, imitation and social learning mechanisms.

Applicants should not be older than 35 years, in accordance with the guidelines of the Max Planck Society. The salary will be at the C2/C3 level on the German university scale, equivalent to an assistant/associate professor.

Applications including a CV, a detailed research plan, and the names of three referees must be received at the adress below by November 15, 2000.

Max-Planck Institut für evolutionäre Anthropologie Personalabteilung Kennzeichen: NachwuchsgruppenleiterIn Inselstraße 22 04103 Leipzig The University of Lausanne invites applications for a position of

UNIVERSITE DE LAUSANNE

full professor in fundamental microbiology

Application with CV, publication list and research plans should be sent to the Doyen de la Faculté des sciences, Collège propédeutique, CH-1015 lausanne, by **November 30. 2000.** Appointment starts of September 1st. 2001 or as agreed.

Supplementary information are available at Prof. J. Dubochet, Président de la section de biologie, tél. +41-21/692 42 80 fax +41-21/692 41 05; jacques.dubochet@lau.unil.ch.

Candidates of either sex are equally encouraged to apply.

More details are available at: http://www.unil.ch/sc/pages/news/postes_e.html

University Of Pennsylvania School Of Medicine. POSTDOČTORAL POSITIONS available: (1) neurophysiology in behaving monkeys to study roles of brain monoaminergic systems in cognitive processes, (2) neurophysiology and neuroanatomy in rats to study roles of monoamine systems in circadian processes and sleep, (3) behavioral pharmacology and anatomy in rats to study roles of monoamine systems in drug abuse. Positions are within the Laboratory of Neuromodulation and Behavior (G. Aston-Jones, director). Applicants must have a strong academic background with appropriate experience. Competitive salary and benefits. Send curriculum vitae and names of three references to: Dr. Gary Aston-Jones, Department of Psychiatry, University of Pennsylvania, VAMC (151), University and Woodland Avenues, Philadelphia, PA 19104. E-mail: gaj@ mail.med.upenn.edu.

POSTDOCTORAL RESEARCH FELLOW DEPARTMENT OF VIROLOGY

(SC/SCI) Seeking individual for gene therapy for blood and vascular diseases. Interest and experience in gene therapy approaches to cardiovascular diseases and hematopoietic stem cells is desirable. Background in AAV vectors, transgene expression, integration site analysis, and models of vascular diseases will be helpful.

Please send curriculum vitae and references to: Ileana Abich, Neeleman Building, Room 209, City of Hope, 1500 East Duarte Road, Duarte, CA 91010. FAX: 626-930-5394; e-mail: iabich@coh.org.

POSTDOCTORAL POSITION available to study the role of Src family tyrosine kinases in the immune system, epithelia, and brain. Work will involve genetic approaches using mouse knockouts/knock-ins, as well as conventional biochemical methods for studying signal transduction pathways. See, for example, J. Exp. Med. 190:1189–1195, 1999; J. Cell Biol. 141:1449–1465, 1998. Candidate must have M.D. or Ph.D. degree. Please send curriculum vitae and three references to: Paul L. Stein, Ph.D., University of Pennsylvania, 415 Curie Boulevard, Philadelphia, PA 19104-6142. FAX: 215-573-7173; e-mail: steinp@mail.med.upenn.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITION in molecular immunology/cell physiology. A one- to two-year temporary position is available immediately to study the *in vitro* mechanisms of cytokines on muscle growth and physiology. Candidates should have a strong background in cell culture, molecular biology, immunology. Send curriculum vitae, reprints, and names and telephone numbers of references to: Katherine M. Byrne, D.V.M., Ph.D., Department of Animal Sciences, Washington State University, P.O. Box 646351, Pullman, WA 99164-6351. E-mail: kbyrne@wsu.edu; FAX: 509-335-4246. Washington State University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to study molecular mechanisms of tumor suppression by pVHL, implications of which include tumor angiogenesis, hypoxia-inducible gene expression, and renal and vascular development. Experience in molecular biology and/or protein chemistry preferred. Please send curriculum vitae and names of three references to: Dr. Herbert T. Cohen, Boston University School of Medicine, X538, 650 Albany Street, Boston, MA 02118. FAX: 617-638-7326; e-mail: httohen@bu.edu.

POSTDOCTORAL FELLOWSHIP in a government (NASA)/academic (University of California, San Francisco) collaboration to study integrin function in osteoblasts using both *in vivo* and *in vitro* methods. Transgenic mice with abnormal integrin function are being used to evaluate the roles of integrins in the skeletal responses to altered mechanical loading. Contact: Dr. Ruth Globus; Telephone: 650-604-5247; FAX: 650-604-3159; e-mail: rglobus@mail.arc.nasa.gov.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATES IN EXPERIMENTAL OPTICS Center for Engineering Science Advanced Research Oak Ridge National Laboratory

The Oak Ridge National Laboratory (ORNL) invites applications for Postdoctoral Research Associates (with potential eligibility for future staff positions) at the Center for Engineering Science Advanced Research (CESAR). Primary support for the Center is provided by the Basic Energy Science Program of Depatment of Energy's Office of Science. Additional funding is provided by the Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research (ONR), the Ballistic Missile Defense Organization (BMDO), NASA, and other government agencies.

CEŠAR's mission is to conduct fundamental research at the frontiers of intelligent systems science and technology. Activities range from cooperating autonomous robots to computational nanotechnology.

Immediate openings exist for outstanding Ph.D. candidates with background in experimental optics. The focus of the research is to achieve high power, high modulation rate, and coherent radiation from arrays of semiconductor lasers. Work will be conducted in the newly established CESAR laboratory for optical communications, a facility with state-of-the-art equipment.

Appointments are for one year with an expected total duration of two years at annual stipend levels in the range of \$45,000 to \$55,000. Appointments are offered through the ORNL Postdoctoral Research Associates Program, which is jointly administered by ORNL's Office of Science Education and the Oak Ridge Institute for Science and Education (ORISE).

For immediate consideration, send a résumé and list of three or more references to the following address: Dr. J. Barhen, CESAR Director, Computer Science and Mathematics Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6355. Telephone: 865-574-7131; FAX: 865-574-0405; e-mail: barhenj@ornl.gov.

The program is open to all qualified individuals without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.

POSTDOCTORAL POSITION UNIVERSITY OF COLORADO, BOULDER

Available immediately to study molecular basis of oxygen sensing and the signal transduction pathways involved in oxygen-regulated gene expression in yeast. Candidates should have a Ph.D. in molecular biology, biochemistry, or genetics and experience in gene expression. Knowledge of recombinant DNA techniques, heme proteins, and yeast molecular genetics desired. Send curriculum vitae along with names of three references to: Dr. R. O. Poyton, Department of Molecular, Cellular, and Developmental Biology, University of Colorado, Boulder, CO 80309. E-mail: Poyton@spot.Colorado.EDU.

POSTDOCTORAL RESEARCH FELLOW-SHIP: Position available for a Postdoctoral Fellow experienced in molecular biology and/or immunology. The studies involve viral and immunological features of HIV pathogenesis. Applicants with a Ph.D., M.D., or Ph.D./M.D. degree should send curriculum vitae and the names of three references to: Jay A. Levy, M.D., Department of Medicine, Division of Hematology/Oncology, University of California, San Francisco, CA 94143-1270. E-mail: levylab@itsa.ucsf.edu. University of California San Francisco is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION is available to study the transcriptional response to kidney injury and repair. The project will include the analysis of kidney mRNA expression in normal and knockout mice using custom DNA microarrays. A background in molecular biology, microarray technology, and bioinformatics is desirable. Send curriculum vitae and list of three references to: W. Brian Reeves, M.D., Chief, Division of Nephrology H040, The Penn State University College of Medicine, 500 University Drive, Hershey, PA 17033. E-mail: wreeves@psu.edu. The Pennsylvania State University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

NIH-funded POSTDOCTORAL POSITION available to study the Protein C pathway using model membrane-mimetic systems. The successful candidate will have the opportunity to interact within an interdisciplinary group of Scientists working at the interface of chemistry, biology, and bioengineering. Applicants should have a Ph.D. degree. Experience in coagulation biochemistry, model lipid membranes, and mass transport principles desirable. Send curriculum vitae to: Dr. Elliot L. Chaikof, M.D., Ph.D., Emory University School of Medicine, Department of Surgery, 1639 Pierce Drive, 5105 WMB, Atlanta, GA 30322. FAX: 404-727-3660; e-mail: echaiko@emory.edu.

POSTDOCTORAL POSITION available to study the role of paxillin and associated proteins in integrinmediated cell adhesion, growth factor signaling, and cytoskeletal organization (J. Cell Biol. 145:851–863). Experience in cell biology and/or molecular biology techniques essential. A background in cell adhesion/signaling desirable. Send curriculum vitae and names of references to: Dr. Chris Turner, Department of Cell and Developmental Biology, SUNY Upstate Medical University, 750 East Adams Street, Syracuse, NY 13210. An Affirmative Action/Equal Employment Opportunity/Americans With Disabilities Act Employer committed to excellence through diversity.

POSTDOCTORAL POSITIONS available to study structure/function relationships in small heat-shock proteins, folding and assembly of oligomeric proteins, and functional dynamics of membrane transporters using spin-labeling EPR and fluorescence spectroscopies. A strong background in EPR or fluorescence spectroscopy and skills in protein chemistry are desirable. Send curriculum vitae and three letters of reference to: Hassane Mchaourab, Department of Molecular Physiology and Biophysics, 702 Light Hall, Vanderbilt University, Nashville, TN 37232. E-mail: hassane.mchaourab@mcmail.vanderbilt.edu.

POSTDOCTORAL POSITIONS in genetics and molecular biology of aging. Studies include longevity genes in yeast, homologs in humans, and their molecular mechanisms (*Trends Microbiol.* 7:247; *Genetics* 152: 170; *Mol. Biol. Cell* 10:3125; *FASEB J.* 10:1096/fj.00-242fje). Applicants with experience in genetics and/or molecular biology send curriculum vitae and names of three references to: Dr. S. M. Jazwinski, Department of Biochemistry, Louisiana State University Health Sciences Center, 1901 Perdido Street, New Orleans, LA 70112. E-mail: sjazwi@lsuhsc.edu. *LSUHSC is an Affirmative Action/Equal Opportunity Employer.*

POSITION AVAILABLE to study encapsulated pancreatic islet cell transplantation (NIH funded). The successful candidate will have the opportunity to interact within an interdisciplinary group of Scientists working at the interface of chemistry, biology, and bioengineering. Applicants should have a Ph.D. degree. Experience in interface of coagulation/inflammatory responses and/or macrophage immunobiology desirable. Send curriculum vitae to: Dr. Elliot L. Chaikof, M.D., Ph.D., Emory University School of Medicine, Department of Surgery, 1639 Pierce Drive, 5105 WMB, Atlanta, GA 30322. FAX: 404-727-3660; e-mail: echaiko@emory.edu.





The Institute is an affiliate of the 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. Its research is directed towards the identification of novel molecular mechanisms underlying disease and the discovery of new drugs. We currently have open positions in our Biotechnology Department:

A challenging and exciting opportunity exists for a:

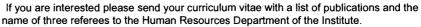
BIOCHEMICAL PHARMACOLOGIST (RECEPTOR PHARMACOLOGIST)

Applicants will have a Ph.D. in Biochemistry, pharmacology or a related discipline. They will also have 2-3 years experience in the design, validation and implementation of enzyme assays for use in the highthroughput screening campaigns.

The position requires a strong background in 7-TM receptor pharmacology. As part of the Biochemical Pharmacology Group, the successful candidate will participate in the design and the implementation of high throughput assays, as well as the down stream enzymology. The successful candidate will work closely to a variety of cross-functional project team, providing key experience and insight.



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





Serono Pharmaceutical Research Institute Serono International S.A.

14, chemin des Aulx, 1228 Plan-les-Ouates, Geneva, SWITZERLAND Tel: +41 22 706 96 66 Fax: +41 22 706 69 65 Internet: www.serono.com



Pierre Fabre Médicament - Centre de Recherche Pierre Fabre - Division of Cancerologie Experimentale under the direction of Dr Bridget T. Hill

Pharmaceutical and Cosmetics company

Pierre Fabre



8000 staff annual turnover 7 Billion FF

RESEARCH SCIENTISTS / SENIOR RESEARCH SCIENTISTS

Highly motivated and talented candidates are sought for postdoctoral scientific positions within our existing multidisciplinary team, to expand our Oncology drug discovery research program.

An experienced scientist with a PhD or equivalent in molecular biology or related subjects, together with proven expertise in molecular biology techniques related to cancer and a sound knowledge of bioinformatics. Candidates should be familiar with and able to develop and use "state-of-the-art" molecular approaches such as gene array technologies, cell expression methodologies, yeast-2-hybrids etc. and should be motivated to carry out original research. A minimum of 2-5 years of postdoctoral or industrial experience in cancer research, together with team building skills is required.

A candidate with a PhD or equivalent, with expertise in biochemistry and experience or an interest in yeast technology. The ideal candidate will have been trained in a cancer research environment, with a knowledge of cancer biology, recombinant DNA technology, protein purification and characterisation, biochemical techniques and assays, cell culture, routine biochemistry gels and immunoblotting.

A tumour biologist or veterinarian with basic knowledge and experience of animal models, to work within an existing team developing in vivo tumour models to support pharmacological research into new compounds with diverse mechanisms of action. Experience in basic molecular biology and/or an interest in tumour histology or orthotopic tumour implantation would be valuable, whilst experience in development and validation of biomarkers as surrogates for tumour responses would be an advantage.

The successful applicants must be capable of working independently, yet in a team environment, and should have good written and verbal communication skills, preferably with a working knowledge of English.

Please send your CV and covering letter (ref. 101/S) to **Pierre Fabre Médicament**, Human Resources Department, Parc Industriel de la Chartreuse, 81106 Castres Cedex, France.

E-mail: recrutement.cadres.pfm@pierre-fabre.com

BDDP CORPORAT

POSTDOCTORAL POSITIONS

Four Postdoctoral positions are available immediately to study mRNA processing (Dr. Gilmartin); cell cycle control of DNA replication and chromosome dynamics (Dr. Pederson); transcription initiation and regulation by RNA polymerases II and III (Dr. Bateman); and structure determination of TPBF, a transcription activator (Dr. Bateman and Dr. Rould). Graduates with a Ph.D. in molecular biology, structural biology, or related disciplines are encouraged to apply. These positions are available for up to three years. Qualified individuals are invited to forward their curriculum vitae and three letters of recommendation to: Dr. Erik Bateman, Microbiology and Molecular Genetics, Markey Center for Molecular Genetics, University of Vermont, Burlington, VT 05405. E-mail: ebateman@zoo.uvm.edu.

POSTDOCTORAL POSITION IN TISSUE ENGINEERING

Bioengineering Center at Tufts University seeks enthusiastic candidates with expertise in musculoskeletal tissue engineering to work on bioreactor studies and structural and functional evaluation of tissue-engineered ligaments. Requirements: a Ph.D. in cell biology, chemical engineering, or a related area; experience in tissue engineering; and bioreactor cultivations of mammalian cells and tissues.

Interested candidates should submit a résumé and cover letter (via mail or e-mail) containing names and telephone numbers of three references to: David L. Kaplan, Department of Chemical Engineering and Bioengineering Center, Tufts University, 4 Colby Street, Medford, MA02155. E-mail: david.kaplan@tufts.edu.

POSTDOCTORAL POSITION available immediately for Ph.D. in genetics or molecular biology. Selected candidate will apply oligonucleotide microarray technology to DNA polymorphism detection in human pharmacogenetics. Familiarity with genomic databases is essential. Experience with mutation detection in eukaryotic DNA is desirable. Send curriculum vitae and names of three references to: Dr. Greer Murphy, Psychiatry Neuroscience, MSLS P-104, Stanford University School of Medicine, Stanford, CA 94305-5485. E-mail: gmurphy@stanford.edu.

POSTDOCTORAL POSITION is anticipated in January 2001 to study the neurobiology of pain mechanisms. Experience in electrophysiology, pharmacology, and molecular biology is desirable but not essential. Opportunities exist for collaboration with neuroscientists at Meharry Medical College and Vanderbilt University. Send curriculum vitae and names of three references to: Sukhbir S. Mokha, Ph.D., Department of Anatomy and Physiology, Meharry Medical College, 1005 D.B. Todd Boulevard, Nashville, TN 37208. E-mail: smokha@mmc.edu.

POSTDOCTORAL: POLYELECTROLYTE-COLLOID COMPLEXES

Studies of polyelectrolyte-micelle and polyelectrolyte-dendrimer complexes (Macromolecules 32:7128, 1999; 33:3324, 2000; J. Phys. Chem. 102:1908, 1998; 103:2347, 1999; JCIS 205:257, 1998). Background in polymer or colloid solution physical chemistry, preferably including light scattering. Send letter and curriculum vitae to e-mail: dubin@chem.iupui.edu. Immediately available.

POSTDOCTORAL POSITION immediately available to study the cell cycle G1 regulation of the human cancer cells. Experience with molecular and biochemical methodology is essential. Send curriculum vitae and three references to: Dr. Lingtao Wu, Department of Pathology, MS Number 103, Children's Hospital Los Angeles/University of Southern California School of Medicine, 4650 West Sunset Boulevard, Los Angeles, CA 90027. FAX: 323-671-3669; e-mail: lingtaow@hsc.usc.edu.

POSITIONS OPEN

INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

The National Institutes of Health has both! For more information, visit our website which lists an array of clinical and postdoctoral opportunities, including tenure-track positions.

http://www.training.nih.gov

NIH is dedicated to building a diverse community in its training and employment programs.

POSTDOCTORAL POSITIONS MOLECULAR BIOLOGISTS/ BIOINFORMATICIANS

Applicants are invited for Postdoctoral/Research Associate positions available immediately in a genomics laboratory to participate in several multidisciplinary research projects involved in the characterization of susceptibility genes for nicotine dependence, schizophrenia, and other mental disorders in human and rat. Ph.D. in molecular biology, neuroscience, bioinformatics, or related fields is desired. Experience in microarray technology, protein chemistry, in situ hybridization, immunohistochemistry, and/or computer programming and data analysis would be advantageous, but other highly motivated individuals are encouraged to apply. Submit curriculum vitae and names, addresses, and telephone numbers of three references to: Dr. Ming D. Li, Department of Pharmacology, University of Tennessee College of Medicine, 874 Union Avenue, Memphis, TN 38163. FAX: 901-448-7206; e-mail: mdli@ utmem.edu; website: http://132.192.34.90. The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/Americans With Disabilities Act/Age Discrimination in Employment Act Employer.

POSTDOCTORAL POSITIONS UNIVERSITY OF WASHINGTON

Postdoctoral positions available immediately to study (1) integrin-extracellular matrix interactions and signaling pathways involved in fibrosis and other pathogenic processes and (2) lymphocyte-endothelial interactions and viral-matrix interactions in HIB pathogenesis. Ph.D. or M.D. and strong background in molecular and/or cell biology are required. Immunology or virology experience desirable for HIB project. Send curriculum vitae and three references to: Dr. Lynn Schnapp, University of Washington, Division of Pulmonary and Critical Care Medicine, 325 Ninth Avenue, Box 359762, Seattle, WA 98104. E-mail: Ischnapp@u.washington.edu.

Two POSTDOCTORAL POSITIONS are available in NIH-funded projects to study the role of signal transduction with a special emphasis on protein kinases and protein phosphatases in regulation of epithelial tight junctions. A Ph.D. degree in biochemistry or related subjects and experience in biochemical and molecular techniques are required. Send curriculum vitae and names of three references to: Dr. R. K. Rao, Department of Physiology, The University of Tennessee, 894 Union Avenue, Room 426, Memphis, TN 38163. FAX: 901-448-7126; e-mail: rkrao@physiol.utmem.edu. The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/Americans With Disabilities Act/Age Discrimination in Employment Act Employer.

POSTDOCTORAL POSITION to study minichromosome segregation in yeast is available (J. Cell. Biol. 149:553, 2000; website: www.esb.utexas.edu/jayaramlab/). Training in yeast cell and molecular biology is preferred. Cell biology experience in other systems will be considered. Knowledge of fluorescence/confocal microscopy is desirable. Salary will be dependent on qualification and experience. Contact: Makkuni Jayaram, Department of Microbiology, University of Texas Austin, Austin, TX 78712. E-mail: jayaram@icmb.utexas.edu.

POSITIONS OPEN

Two POSTDOCTORAL FELLOWS in ecology and evolution sought for collaboration between Princeton University and Cornell University. Cornell Fellow must have good understanding of nutrient dynamics and interest in linking ecosystem-scale patterns to properties of communities, organisms, and local environments. Will assist in assembly and interpretation of databases on ecosystem patterns and in collection of data from forests in Chile and elsewhere and will interact with collaborators at Princeton on linking models to observed macroscopic patterns.

Princeton Fellow must have good understanding of ecosystem dynamics in either terrestrial or aquatic systems and facility with mathematical modeling and computer simulation. Will assist in the development of modeling approaches and interact with empirical colleagues at Princeton and Cornell.

Applicants should send a statement of qualifications, curriculum vitae, and three letters of reference to: Lars O. Hedin, Department of Ecology and Evolutionary Biology, Cornell University, Ithaca, NY 14853 (e-mail: lohl@cornell.edu) or to Simon Levin, Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ 08544 (e-mail: slevin@princeton.edu). Ph.D. is required before appointment begins.

Princeton University and Cornell University are Equal Opportunity/Affirmative Action Employers. Applications from women and minorities are encouraged.

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS

Two positions available immediately to investigate cellular and molecular mechanisms in breast and colorectal cancers. Studies involve genetic screening, gene cloning, and gene and protein regulation. Experience in molecular genetics, cloning, molecular biology (differential gene display, DNA microarrays), computer software for molecular biology, and/or strong cell biology (signal transduction) background preferred.

Send curriculum vitae and references to: Dr. Jay Vadgama, Molecular Oncology Program, Department of Medicine, Charles R. Drew University of Medicine and Science, 1621 East 120th Street, Hawkins Building, Los Angeles, CA 90059. Telephone: 323-563-4853; FAX: 323-357-3424; e-mail: javadgam@cdrewu.edu. Drew University is an Equal Opportunity/Affirmative Action Employer. Applications from women and minority candidates are strongly encouraged.

POSTDOCTORAL POSITION IN NEUROSCIENCE

NIH-funded position open immediately to study the electrophysiological properties of vestibular sensory neurons in brain slices. Studies are focused on changes in K⁺ currents and synaptic currents during development and after vestibular nerve lesions, using patch clamp recording, dye injection, pharmacological testing, and computer analysis. Experience in patch clamp recording and a background in neurobiology preferred. Send curriculum vitae, statement of research interests, and names of three references to: Dr. K. Peusner, Department of Anatomy and Cell Biology, George Washington University School of Medicine, 2300 I Street N.W., Washington, DC 20037. E-mail: anakdp@gwumc.edu.

POSTDOCTORAL POSITION IMMUNOLOGY

Available immediately to investigate interferongamma gene transcription during development of immune and autoimmune responses. A combination of modern biochemistry, molecular biology, and immunology approaches will be employed. Previous experience in either of these areas is highly desirable. Send curriculum vitae including three names of references to: Thomas M. Aune, Ph.D., Division of Rheumatology and Immunology, Department of Medicine, Vanderbilt University School of Medicine, 21st and Garland, Nashville, TN 37232. E-mail: thomas.aune@mcmail.vanderbilt.edu. Equal Opportunity Employer.

RPI, a leader in the development of ribozymebased pharmaceutical products is currently seeking qualified candidates to join our facility in Boulder, Colorado. We currently have two Biochemistry positions available.

Biochemistry Scientists

Successful candidates for the first position will be involved with the research program for the enzymatic manufacture of ribozymes and ribozyme precursors. Qualifications include a Ph.D. in Chemistry, Biology or Microbiology. A strong background in enzymology is essential. Please refer to job code # 071.

Successful candidates for the second position will be involved with the Invitro/vivo selection program. This program uses combinatorial approaches to identify novel, and improve existing ribozymes for therapeutic use. Qualifications for this position include a Ph.D. in Chemistry or Biochemistry. Previous development of Invitro selection schemes is required. Please refer to job odd # 072.

RPI offers a competitive salary and an excellent benefits package, including stock options, stock purchase plan, 401(k) plan and flexible benefits program. For consideration, please send your resume and cover letter indicating job code to: Ribozyme Pharmaceuticals, Inc., Job Code. ___, 2950 Wilderness Place, Boulder, CO 80301. Fax: (303) 449-6995. E-mail: jobs@rpi.com.

Visit our Web site at: http://www.rpi.com

No phone calls please. We are an equal opportunity employer.



EUROPEAN OPPORTUNITIES



University of Zurich, Switzerland

The Faculty of Science invites applications for a newly established

Assistant Professorship in Anthropology

This position, created in response to a marked expansion in research activities and student numbers, is to be held in the Anthropological Institute and Museum. This "new blood" position is a tenure track and suitable for younger candiidates that wish to develop their career.

Applicants should have an internationally competitive research program and outstanding scientific achievements in a suitable field of Biological Anthropology. Broad knowledge of primatology and human evolution is expected. There are no restrictions concerning the topic of research, but preference will be given to areas in which new theoretical and methodological approaches are opening up promising developments (e.g. computer-based analyses, molecular phylogenetics, primate field studies integrating several approaches).

The successful candidate will be expected to establish a research group and to participate in the teaching of intermediate and advanced courses at the University. It is expected that the successful candidate will be German-speaking or acquire proficiency in the German language within two years.

The Anthropological Institute and Museum offers extensive collections, an experienced staff and wide-ranging interests and stimulating, close collaboration with colleagues in the recently established Consortium for Evolution and Biodiversity.

Applications including curriculum vitae, a publication list, a short summary of current and future activities in research and teaching, copies of three recent key publications, and names and addresses of three referees, should be sent by end of October 2000 to:

Prof. Dr. V. Ziswiler, Dekanet der Mathematisch-naturwissenschaftlichen Fakultaet der Universitaet Zurich, Winterthurerstr, 190, CH-8057 Zurich phone +411 635 4006, fax: +411 635 6806, e-mail: zis@zoolmus.unizh.ch

EUROPEAN OPPORTUNITIES

LABORATORY OF MOLECULAR BIOLOGY, CAMBRIDGE Post-Doctoral Position in Neurobiology

Applications are invited for a post-doctoral position in the group of Dr Michel Goedert to work on the production of experimental models of common neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease. Candidates should have a background in molecular biology, biochemistry and/or neurobiology, with a strong interest in neurodegenerative diseases.

The post is funded by the Alzheimer's Research Trust and available for three years. The appointment will be to MRC Salary Band 4 (£20,000 - £30,008 per annum) depending upon qualifications and experience. This is supported by a performance-related pay scheme and MRC Pension Scheme.

Further information can be obtained from Dr. Michel Goedert on: Tel: (01223) 402036.

E-mail: mg@mrc-lmb.cam.ac.uk

Applications, including two copies of a full CV, the names and addresses of two professional referees should be sent preferably by email by 29 October 2000, quoting reference NB/900/16 to:

recruit@mrc-lmb.cam.ac.uk

or send to:

Philippa Hall, Personnel Assistant, MRC Centre, Hills Road, Cambridge CB2 2QH.

Some financial assistance with relocation may be available



The Medical Research Council is an Equal Opportunity Employer and operates a strict no smoking policy.



University of Zurich, Switzerland

The Faculty of Science invites applications for a

Full Professorship in Theoretical Elementary Particle Physics

The new professor is expected to pursue vigorous research and to teach theoretical physics at all levels. She or he will find a very stimulating environment including major experimental activities at the University, the ETH and PSI with strong involvments in HERA, LHC and Neutrino physics.

Candidates with a recognized scientific record in theoretical elementary particle physics are asked to send their curriculum vitae, list of publications and a summary of their research interests to the **Dean of the Faculty of Science** (Mathematischnaturwissen-schaftliche Fakultaet), **Prof. K. Brassel, University of Zurich, Winterthurerstrasse 190, CH-8057 Zurich, by November 30, 2000**.

For more information, contact:

Prof. D. Wyler (wyler@physik.unizh.ch).

Please visit our website at:

http://www-theorie.physik.unizh.ch.

The University encourages female candidates to apply with a view towards increasing the proportion of female professors.

POSTDOCTORAL FELLOWSHIPS

Two Postdoctoral positions are immediately available to investigate the mechanisms of translesion replication and mutagenesis. One position is for work with yeast and humans, with emphasis on DNA polymerase zeta and Revlp (Nelson et al., Science 272: 1646, 1996; Nelson et al., Nature 382:729, 1996; Gibbs et al., Proc. Natl. Acad. Sci. U.S.A. 95:6876, 1998; Gibbs et al., Proc. Natl. Acad. Sci. U.S.A. 97; 4186, 2000). The other is for work on E. coli (Vanderwiele et al., Proc. Natl. Aca.d Sci. U.S.A. 95: 15519, 1998; O'Grady et al., J. Bact. 182:2285). Send curriculum vitae and three references to: Christopher Lawrence, Department of Biochemistry and Biophysics, University of Rochester Medical Center, Rochester, NY 14642 U.S.A. Telephone: 716-275-2948; FAX: 716-275-6007; email: christopher_lawrence@urmc.rochester.edu.

RESEARCH ASSOCIATE DUKE UNIVERSITY MEDICAL CENTER

NIH-supported POSTDOCTORAL POSITION available immediately to study the molecular basis for Factor V-membrane interactions and regulation of the prothrombinase complex in hemostasis and thrombosis (see website: http://www.canctr.mc.duke.edu/Dr.WilliamKane). The successful candidate must have published experience in biochemistry and molecular biology. Experience in plasmon resonance, molecular modeling, and protein isolation (FPLC) is also desired. Send curriculum vitae and names of three references to: William H. Kane, M.D., Ph.D., Division of Hematology, DUMC-3656, Duke University Medical Center, Durham, NC 27710. E-mail: william.kane@duke.edu. Duke is an Equal Opportunity Employer.

THE HEISER PROGRAM FOR RESEARCH IN LEPROSY AND TUBERCULOSIS

Beginning POSTDOCTORAL RESEARCH FELLOWSHIPS in leprosy and tuberculosis available in amounts up to \$28,000 per year (plus other allowances) and research grants in leprosy only in amounts up to \$30,000. Applicants should have M.D., Ph.D., or equivalent degree. Application deadline February 1, 2001, for awards to be activated July through December 2001. For information and forms, write: The Heiser Program, 450 East 63rd Street, New York, NY 10021. FAX: 212-688-6794.

POSTDOCTORAL POSITION in evolutionary genomics and astrobiology. The project involves study of the early evolution of life through phylogenetic and molecular clock analysis of prokaryotic and eukaryotic sequence data, mostly from available complete genomes (website: http://carib.bio.psu.edu/postdoc/). Send (by e-mail) your curriculum vitae and names of three references to: S. Blair Hedges, Department of Biology, 208 Mueller Laboratory, The Pennsylvania State University, University Park, PA 16802. E-mail: sbh1@psu.edu; Telephone: 814-865-9991; FAX: 814-865-9131. Affimative Action/Equal Opportunity Employer.

DYSTONIA FELLOWSHIP: A two-year FELLOWSHIP of \$50,000 per year focusing on genetics, treatments, and studies of torsinA biology related to dystonia is available from: Dystonia Medical Research Foundation, One East Wacker Drive, Suite 2430, Chicago, IL 60601. Telephone: 312-755-0198; FAX: 312-803-0138; e-mail: dystonia@dystonia-foundation.org; website: www.dystoniafoundation.org. Application deadline is December 30, 2000.

POSTDOCTORAL POSITION available to study the molecular biology of hepatitis B and C viruses and antiviral therapies for hepatitis B and C. Experience in molecular biology/virology/biochemistry is desired. Mail or FAX curriculum vitae and names of three references (or three letters of reference) to: Dr. D. L. Tyrrell, Department of Medical Microbiology and Immunology, 606 Heritage Medical Research Centre, University of Alberta, Edmonton, Alberta T6G 2S2 Canada. FAX: 780-492-9828.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATES IN EXPERIMENTAL QUANTUM TELEPORTATION Center for Engineering Science Advanced Research Oak Ridge National Laboratory

The Oak Ridge National Laboratory (ORNL) invites applications for Postdoctoral Research Associates (with potential eligibility for future staff positions) at the Center for Engineering Science Advanced Research (CESAR). Primary support for the Center is provided by the Basic Energy Science Program of Department of Energy's Office of Science. Additional funding is provided by the Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research (ONR), the Ballistic Missile Defense Organization (BMDO), NASA, and other government agencies.

CEŠAR's mission is to conduct fundamental research at the frontiers of intelligent systems science and technology. Activities range from cooperating autonomous robots to computational nanotechnology.

Immediate openings exist for outstanding Ph.D. candidates with experimental background in quantum optics. The focus of the research is on quantum teleportation and its applications to quantum computing and information processing. Work will be conducted in the newly established CESAR laboratory for Quantum Teleportation, a facility with state-of-the-art equipment, including an ultrabright EPR source.

Appointments are for one year with an expected total duration of two years at annual stipend levels in the range of \$50,000 to \$60,000 depending upon prior experience. Appointments are offered through the ORNL Postdoctoral Research Associates Program, which is jointly administered by ORNL's Office of Science Education and the Oak Ridge Institute for Science and Education (ORISE).

For immediate consideration, send a résumé and list of three or more references to the following address: Dr. J. Barhen, CESAR Director, Computer Science and Mathematics Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6355. Telephone: 865-574-7131; FAX: 865-574-0405; e-mail: barhenj@ornl.gov.

The program is open to all qualified individuals without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.

POSTDOCTORAL RESEARCH SCIENTISTS AND RESEARCH TECHNICIANS: Thomas Jefferson University has positions available for Postdoctoral Research Scientists and Research Technicians (cell/molecular biology/flow cytometry) available immediately for studies on functional characterization and plasticity of purified hematopoietic stem cells (Science 285:1553, 1999; Nature 401:489, 1999). Experience in hematopoietic stem/progenitor cell assays, retroviral gene transfer, and cell and molecular biology techniques (including retroviral vector design and/or NOD-SCID xenotransplantation assays) is required. FACS operator must have extensive experience in flow cytometry analysis/sorting (Becton Dickinson/Coulter equipment). Competitive salary. Submit curriculum vitae and the names of three references to: Dr. C. Peschle/Dr. B. Ziegler, Kimmel Cancer Center of Thomas Jefferson University, 233 South 10th Street, BLSB Room 609, Philadelphia, PA 19107. Telephone: 215-503-1763; FAX: 215-923-0249; e-mail: Cesare.Peschle@ mail.tju.edu or B_Ziegler@lac.jci.tju.edu. Thomas Jefferson University is an Equal Opportunity Employer.

POSITIONS OPEN

POSITION IN MOLECULAR NEUROBIOLOGY DEPARTMENT OF NEUROBIOLOGY AND BEHAVIOR University of California, Irvine

Applications are invited for a tenure-track position at the level of ASSISTANT PROFESSOR in molecular neurobiology. The Department of Neurobiology and Behavior emphasizes interdisciplinary approaches to the study of neural plasticity and behavior. Preference will be given to applicants whose research interests integrate with current Departmental research themes, which include learning and memory, integrative neuroscience, drug abuse, and development and neuronal reorganization following injury or disease. Please submit curriculum vitae, description of research interests, and the names and addresses of three potential references by November 15, 2000, to Chair, Department of Neurobiology and Behavior, University of California, 2205 Bio Sci II, Irvine, CA 92697-4550.

The University of California, Irvine, is an Equal Opportunity Employer committed to excellence through diversity.

STRESS NEUROBIOLOGY

POSTDOCTORAL and RESEARCH ASSIST-ANT POSITIONS are available to study the neurobiological and genetic mechanisms underlying the association between stress and psychiatric and medical disorders (e.g., depression, anxiety, eating disorders, substance abuse, irritable bowel syndrome). Individuals will work with a collaborative group of investigators (Dr. Rita J. Valentino, Dr. Sheryl G. Beck, Dr. Irwin Lucki) that utilize a variety of approaches from cellular to systems level to study central responses to stress. Applicants should have experience in one of the following approaches: neuroanatomical techniques, electrophysiology (in vivo or in vitro), microdialysis, or behavioral pharmacology. Applicants should contact: Dr. Rita J. Valentino, 706 Abramson Pediatric Research Center, Children's Hospital of Philadelphia, Civic Center Boulevard, Philadelphia, PA 19104. Telephone: 215-590-0650; e-mail: valentino@e-mail.chop.edu.

A POSTDOCTORAL POSITION is available for an individual with strong experience in molecular and cellular biology. Projects focus on the role of the Src tyrosine kinase in intestinal cell growth control and the functional analysis of RACK1, an Src and PKC binding partner. This project is well funded through an NIH grant. Qualified candidates must be U.S. citizens or permanent residents with a Ph.D. degree or completing a Ph.D. graduate program. Send curriculum vitae and names and telephone numbers of three references to Dr. Chris Cartwright, M.D., Department of Medicine, Division of Gastroenterology, CCSR Building, Room 3115C, 269 Campus Drive, Stanford University School of Medicine, Stanford, CA 94305-5187. E-mail: chris. cartwright@stanford.edu. FAX: 650-723-5488.

POSTDOCTORAL POSITION

A Postdoctoral position is available immediately to study cytokine gene expression. Candidates should be experienced in molecular and cell biology, genetics, and physiology. The salary will be commensurate with experience, and the appointment is for two years. Send curriculum vitae to: Dr. Salomon Amar, Boston University Medical Campus, 715 Albany Street (G 05), Boston, MA 02118. Telephone: 617-6 8-4983; FAX: 617-638-8549; e-mail: Samar@bu.edu. Boston University is an Affirmative Action/Equal Opportunity Employer.

DYSTONIA GRANTS: One-year grants of \$40,000 focusing on genetics, treatments, and studies of torsinA biology related to dystonia are available from: Dystonia Medical Research Foundation, One East Wacker Drive, Suite 2430, Chicago, IL 60601. Telephone: 312-755-0198; FAX: 312-803-0138; e-mail: dystonia@dystonia-foundation.org; website: www.dystonia-foundation.org. Application deadline is December 30, 2000.

EUROPEAN **O**PPORTUNITIES



Office of Intellectual

Property

LUDWIG INSTITUTE FOR CANCER RESEARCH consists of

ten academic centers and four administrative offices established worldwide.

The New York Office seeks a further **Scientific Administrative Officer** to assist in identifying areas of research within the Institute suitable for patent protection. By working closely with branch scientists, existing members of the London and New York Intellectual Property Offices and the Institute's patent counsel, the successful candidate will help in preparing and prosecuting patent applications.

Applicants should have had at least 3 years postgraduate research experience, preferably in relation to immunology or molecular biology. Some knowledge of oncology would be helpful. Prior experience of patenting would be advantageous. However, a wide ranging interest in science and an ability to rapidly assimilate new data are essential. Some international travel may be involved.

Salary will depend on previous experience and is subject to negotiation.

Interested candidates should apply in writing to A. Munro Neville M.D., at either of the offices below enclosing a copy of their curriculum vitae, together with the name of two referees, before 30 October 2000 to:

Ludwig Institute for Cancer Research

6th Floor Glen House Stag Place London SW1E 5AG

UK ---

Fax: 0044 (0) 20 7828 5427

-or-

Ludwig Institute for Cancer Research

605 Third Avenue New York, NY 10158 USA

Fax: 001 212 450 1555



houses molecular biology, genomics, biochemistry, cell biology, organic chemistry laboratories, and a state-of-the-art bioinformatics network. Immediate opportunities exist in the following areas:

Director, Discovery Biology

A highly creative and motivated biologist is needed to lead a multidisciplinary team in the anticancer and cardiovascular disease areas. Responsible for all biological discovery activities including high throughput screening, in vitro and in vivo assay development and pharmaceutical profiling of prospective IND candidates. The new director will establish new research initiatives in oncology including external academic and industrial collaborations. The successful candidate will possess proven track record in the pharmaceutical industry, particularly in the discovery of anticancer agents. Strong leadership and scientific management skills, the ability to work effectively in a multidisciplinary environment and a thorough knowledge of modern drug discovery technologies and molecular targets are essential. A Ph.D. in molecular/cellular biology, pharmacology or a related discipline and at least 10 years research experience in the pharmaceutical industry is required.

Staff Scientist - Oncology

Candidates for this position should possess a Ph.D. in Cell Biology or a related discipline and possess at least 5 years of postdoctoral research experience, including relevant experience in the pharmaceutical industry. The primary responsibility will be to establish and implement cellular assays for the evaluation of compounds in support of drug discovery projects in the field of Oncology. Experience in cellular systems relevant to anticancer drug discovery is highly desirable. The successful candidate is also expected to contribute to the identification and implementation of new drug discovery targets directed towards novel cancer chemotherapies. Excellent communication skills, the ability to work effectively in a team environment and effective scientific management skills are essential.

Senior Research Associate - High Throughput Screening

The successful candidate will serve as an integral member of our high throughput screening (HTS) team. A minimum of a BA/BS in biological sciences with 5 years of industrial experience is required. This position also requires strong assay development and performance skills, familiarity with laboratory instrumentation, and a firm understanding of experimental design. Proficiency in computer programs such as Excel, Access, and Word and the willingness to learn additional programs specific to HTS is essential. Other prerequisites include sound written and oral communication skills, attention to detail, the ability to work both independently and as a member of a cohesive team. Must have aptitude for troubleshooting problems quickly and systematically, plus the ability to work with members of other departments within the organization. The ideal candidate will have HTS experience with fluorescence-based assays, ELISA, and other assay techniques amenable to high throughput automation. Familiarity with computer programming languages (C, C++, Vsual Basic) is an asset, but not required.

Senior Research Associate - Medicinal Chemistry

Contribute your talents to a dynamic team of chemists devoted to the design, synthesis, purification and characterization of novel organic compounds for biological evaluation. A BS or MS in Chemistry is required along with 1-5 years of laboratory experience in organic synthesis. An extensive knowledge of synthetic organic chemistry, modern purification techniques and spectroscopic methods is essential as well as effective written and verbal communication skills. The selected candidate should be motivated towards self-development and enthusiastic participation in a team environment.

Systems Administrator

A highly creative and dedicated Information Systems Specialist is needed to be responsible for the Company's Unix, NT, and Citrix servers and networking operations. Will support IRIX servers and workstations with a variety of scientific software and databases. Will also entail working with Legato backup/replication, RAID systems, shell scripting, firewalls, VPN's, Cisco routers/switches, Sendmail/DNS/NFS/NIS and other TCP/IP related services. Will also develop and support Citrix application server farms and NT servers for support of biomedical research and clinical development operations. Manage a team that maintains the help desk support for the company. Must be able to plan new computing resources and have strong troubleshooting skills to fix hardware, software and LAN network problems. Strong interpersonal and communication skills essential. Two to five years UNIX and NT systems administration experience and Bachelor's degree preferred. Experience administering Windows and NT domains and applications a plus.

We offer highly competitive salaries, comprehensive benefits and strong growth potential. For prompt, confidential consideration, mail/fax/e-mail your resume to:

CHUGAI BIOPHARMACEUTICALS, INC.

Attn: Human Resources 6275 Nancy Ridge Drive, San Diego, CA 92121 Fax: 858-535-5996

E-mail: trice@chugaibio.com

Equal Opportunity Employer

POSTDOCTORAL POSITION

A Postdoctoral position is available in the Lineberger Comprehensive Cancer Center in the Department of Microbiology and Immunology at the University of North Carolina—Chapel Hill. Research involves the study of Kaposi's sarcoma-associated herpes virus (KSHV/HHV-8) and its simian homolog, rhesus monkey rhadinovirus (RRV). Several interesting projects that examine questions in molecular virology are available. These encompass the areas of signal transduction, transcription, and the construction of recombinant herpes viruses. These projects provide excellent training for Postdoctoral Scientists who have received a Ph.D. or M.D. and plan a career in infectious disease research.

For more information on the research environment at the Lineberger Comprehensive Cancer Center, Department of Microbiology and Immunology, University of North Carolina-Chapel Hill, and the Research Triangle area, please look up the following websites: http://cancer.med.unc.edu/training/ and http://www.med.unc.edu/microimm/.

Please send curriculum vitae and three letters of reference by regular mail or e-mail to: Dr. B. Damania, Lineberger Comprehensive Cancer Center, University of North Carolina-Chapel Hill, CB 7295, Mason Farm Road, Chapel Hill, NC 27599-7295. E-mail: bdamania@hms.harvard.edu.

Mayo Clinic POSTDOCTORAL POSITION with NIH training grant support is available for a Postdoctoral Fellow with an interest in the molecular mechanism of liver cancer development. The project is a collaborative effort between the Division of Gastroenterology and Hepatology and the Cancer Genetics Program of the Mayo Comprehensive Cancer Center. Ongoing studies include chromosomal fragile site cloning, microarray analysis of liver cancer, and discovery of potential therapeutic gene targets in liver carcinogenesis. Candidates must be U.S. citizens or permanent residents and have an M.D. or Ph.D. degree. Please send curriculum vitae and the names of three references to: Lewis R. Roberts, M.D., Ph.D., Division of Gastroenterology and Hepatology, Mayo Clinic, 200 First Street S.W., Rochester, MN 55905. Telephone: 507-284-4823; e-mail: roberts.lewis@ mayo.edu. Mayo Foundation is an Affirmative Action/ Equal Opportunity Employer and Educator.

POSITIONS IN INNOVATIVE MICROSCOPIC APPROACHES TO CANCER BIOLO-GY. Positions are available to develop innovative technologies to study gene expression in cancer cells using state-of-the-art light microscopy and image analysis. The project will involve developing automated microscopy for high-throughput imaging and special analysis of cells from patients probed by multicolor FISH. The project will utilize microarray chip technology and coupling multiple DNA probes to fluorochromes. Candidates should have experience and publications involving pathobiology of cancer, optical imaging, M-FISH, or DNA chemistry. Please send curriculum vitae to: Robert H. Singer, Professor and Director, Institute of Molecular Medicine, Golding 601, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, New York, NY 10461. E-mail: rhsinger@aecom.yu.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITION: Thomas Jefferson University has two Postdoctoral positions available immediately to study signal transduction in lymphocyte apoptosis (Nature 392:296; MCB 16:2756). Applicants should have a Ph.D. and/or M.D. and experience in molecular/cellular immunology. Projects involve training in contemporary biochemisry, molecular biology, and particularly in transgenic/knockout mouse technologies. State-of-theart facilities, competitive salaries, and excellent benefits. Send curriculum vitae and references to: Dr. Jianke Zhang, Kimmel Cancer Institute, Department of Microbiology and Immunology, Thomas Jefferson Medical College, 731 BLSB, 233 South 10th Street, Philadelphia, PA 19107. FAX: 215-923-4153; e-mail: jzhang@lac.jci.tju.edu. Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATES IN EXPERIMENTAL OPTICAL COMPUTING

Center for Engineering Science Advanced Research Oak Ridge National Laboratory

The Oak Ridge National Laboratory (ORNL) invites applications for Postdoctoral Research Associates (with potential eligibility for future staff positions) at the Center for Engineering Science Advanced Research (CESAR). Primary support for the Center is provided by the Basic Energy Science Program of Department of Energy's Office of Science. Additional funding is provided by the Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research (ONR), the Ballistic Missile Defense Organization (BMDO), NASA, and other government agencies.

CEŠAR's mission is to conduct fundamental research at the frontiers of intelligent systems science and technology. Activities range from cooperating autonomous robots to computational nanotechnology.

Immediate openings exist for outstanding Ph.D. candidates with experimental background in the area of optical computing. The focus of the research is on the development of a petascale digital optical computer for solving certain classes of partial differential equations.

Appointments are for one year with an expected total duration of two years. Appointments are offered through the ORNL Post-doctoral Research Associates Program, which is jointly administered by ORNL's Office of Science Education and the Oak Ridge Institute for Science in Education (ORISE). Depending upon prior experience, annual stipend levels of \$50,000 to \$60,000 will be offered. Subject to performance and funding availability, a regular staff appointment may be considered.

Some positions may require the ability to obtain and maintain a U. S. Department of Energy security clearance; therefore, U. S. citizenship may be required.

For immediate consideration, send a résumé and list of three or more references to the following address: Dr. J. Barhen, CESAR Director, Computer Science and Mathematics Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6355. Telephone: 865-574-7131; FAX: 865-574-0405; e-mail: barhenj@ornl.gov.

The Postdoctoral program is open to all qualified individuals without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.

POSTDOCTORAL POSITIONS IN NEUROBIOLOGY UNIVERSITY OF WASHINGTON

Positions are available for individuals with a Ph.D., M.D., or an equivalent degree to study postsynaptic membrane assembly and synapse formation. The role of dystrophin-associated proteins in forming membrane specializations necessary for synaptic function is being studied using molecular and cell biological approaches and transgenic mouse technology. For a recent publication, see the September 18, 2000, issue of *The Journal of Cell Biology*.

Send curriculum vitae and names and telephone numbers of three references to: Dr. Stanley C. Froehner, Department of Physiology and Biophysics, Box 357290, University of Washington, Seattle, WA 98195-7290. FAX: 206-685-0619; e-mail: froehner@u.washington.edu.

The University of Washington is building a culturally diverse community and strongly encourages applications from female and minority candidates. The University of Washington is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

CARDIOVASCULAR RESEARCH FOR GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS University of Nebraska Medical Center

The University of Nebraska Medical Center offers a multidisciplinary training program in basic cardiovascular research. Our special strengths are in the broad area of cardiovascular biology. Twenty faculty members are mentoring both graduate students and postdoctoral fellows. Our particular strengths are in the areas of neural control of the circulation in heart failure, vascular biology of the cerebral circulation, renal circulatory control in diabetes, modulation of membrane ion channels in cardiac myocytes, potassium channels in renal mesangial cells, molecular biology of viral endocarditis, regulation of the extracellular matrix in blood vessels, and the development biology of cardiac septation. Positions are well supported and include stipend, health insurance, and travel to scientific meetings. Details of the interests of faculty and a description of the program may be found on our website: http://www.unmc.edu/Physiology/cardio_ center.html. Competitive applicants may apply directly to: Dr. Irving H. Zucker, Department of Physiology and Biophysics, 984575 Nebraska Medical Center, Omaha, NE 68198-4575. E-mail: izucker@unmc.edu.

The University of Nebraska Medical Center is an Equal Opportunity Employer. These positions are restricted to permanent residents and citizens of the United States.

POSTDOCTORAL POSITIONS at Vanderbilt University School of Medicine available immediately to study signal transduction events related to cell adhesion and cancer metastasis. Our laboratory discovered p120-catenin, a prominent tyrosine kinase substrate and regulator of cadherins. Major projects include (1) p120 and Rho GTPases in metastasis; (2) p120 tyrosine and serine phosphorylation; (3) structure/function analysis of p120; (4) p120 and its transcription factor binding partner, Kaiso, in the nucleus; and (5) mouse conditional knockout of p120 in the skin and mammary gland. Experience in protein biochemistry, molecular biology, and/or transcription preferred. Vanderbilt University is a leader in biomedical research, and Nashville has world-class music and Titan football. Funds available are restricted to U.S. citizens or permanent residents. Please send letter of interest, curriculum vitae, and names of three references to: Al Reynolds, Ph.D., Department of Cancer Biology, Vanderbilt University, 1161 21st Avenue S., MCN-C-2310, Nashville, TN 37212. Email: al.reynolds@mcmail.vanderbilt.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITIONS are available immediately for Neurophysiologists to study the role of mossy fiber synaptic reorganization in epilepsy and the role of GABA in attenuation of ischemic brain damage. Experimental approaches include whole cell patch clamp recording and fluorescence/confocal imaging. Experience with electrophysiological techniques is highly desirable. Send curriculum vitae and names of three references to: Dr. J. Victor Nadler, Department of Pharmacology and Cancer Biology, Box 3813, Duke University Medical Center, Durham, NC 27710. E-mail: nadle002@acpub.duke.edu. Website: hr.duke.edu.

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POSTDOCTORAL FELLOW NEUROCHEMISTRY, NEUROSCIENCE

A Postdoctoral position is available to study neurotransmitters (glutamate and catecholamine) involved in mechanisms of pain and analgesia in the central nervous system. Experience in neurochemical (HPLC) assay and electrophysiological studies is preferred. Send curriculum vitae and the names of three references to: Dr. Hui-Lin Pan, Penn State University College of Medicine, The Milton S. Hershey Medical Center, Department of Anesthesiology, P.O. Box 850, H187, Hershey, PA 17033.

POSTDOCTORAL FELLOWSHIP IN GENE THERAPY OF CANCER NATIONAL CANCER INSTITUTE

The Metabolism Branch, National Cancer Institute, is offering a three-year Postdoctoral Training Fellowship position in the laboratory of Dr. John Morris for an individual interested in gene therapy of cancer. The work is primarily focused in two areas: (1) the development, characterazation, and testing of a new class of retroviral vectors and their stable producer cells that can be used to generate vectors that express potentially toxic genes; or (2) the study of host immune and cytokine responses to enzyme/prodrug therapy and viral gene transfer vectors including replicating adenoviruses. Candidates should have a strong background in molecular biology, cloning, cell biology, and experience with the generation, purification, and titering of retroviral and adenoviral gene transfer vectors. Interested candidates should submit a statement of interest, curriculum vitae, list of publications, and three letters of recommendation to: John C. Morris, M.D., Metabolism Branch, NCI, Building 10, Room 4N115, 10 Center Drive, Bethesda, MD 20892-1374. The National Cancer Institute is an Equal Employment Opportunity and Affirmative Action Employer that values and fosters diversity throughout the entire organization. Selections for these positions will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, gender, national origin, politics, marital status, physical or mental disability, age, sexual orientation, or membership or nonmembership in an employee organization.

The Liver Study Unit at the University of Nebraska Medical Center (UNMC)/Omaha Veterans Administration Medical Center (OVAMC) has an immediate opening for a POSTDOCTORAL POSITION. The candidate should have a Ph.D. in biochemistry, cell biology, or a related field. The aim of this research is to investigate the effect of ethanol consumption on proteolytic systems in the liver. The primary research emphasis will be on the ubiquitin-proteasome pathway and its possible role in alcohol-induced hepatotoxicity. Funding is for a minimum of two to three years (initial one-year appointment; reappointments on a yearly basis). Imterested candidates should send or e-mail their curriculum vitae with the names, addresses, and telephone numbers and/or e-mail addresses of three references to: Terrence M. Donohue, Jr., Ph.D., Liver Study Unit, OVAMC, 4101 Woolworth Avenue, Omaha, NE 68105. E-mail: tdonohue@unmc.edu. UNMC/OVAMC is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. Not an H-1 or J-1 opportunity.

The Laboratory of Gastrointestinal Oncology and New Drug Development at Memorial Sloan-Kettering Cancer Center is seeking a POSTDOCTORAL FELLOW to study the molecular mechanisms of chemotherapy and CDK inhibitor-induced apoptosis and cell cycle arrest. Applicants should have a Ph.D. degree with extensive experience in molecular and cellular biology. Special consideration will be given to candidates with experience in yeast two-hybrid systems. Previous postdoctoral research experience is desirable. Send curriculum vitae, bibliography, and names of three references to: Gary K. Schwartz, M.D., Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. FAX: 212-717-3320; e-mail: Schwartz@MSKCC.org.

A POSTDOCTORAL POSITION is available immediately to study the organization and replication of a novel form of mitochondrial DNA (kinetoplast DNA). Research focuses on the mechanism of cell cycle regulation of DNA replication genes, the identification of new genes involved in kinetoplast DNA replication, and the role of histone-like proteins in the organization and segregation of kDNA networks. See Mol. Cell. Biol. 19:6174-6182, 1999; PNAS 96: 2579-2581, 1999; Mol. Cell. Biol. 16:564-576, 1996. Send curriculum vitac and the names of three references to: Dr. Dan S. Ray, Molecular Biology Institute, UCLA, Los Angeles, CA 90095-1570. E-mail: danray@mbi.ucla.edu.

POSITIONS OPEN

POSTDOCTORAL POSITIONS DUKE UNIVERSITY

Professor M. C. Pirrung seeks Postdoctoral Fellows with a recent Ph.D. and diverse interests for multidisciplinary research in chemical biology (website: www.chem.duke.edu/~pirrung). Send curriculum vitae, publication list, and references (with contact information) to: Campus Box 90317, Durham, NC 27708. FAX: 919-660-1591.

EUROPEAN OPPORTUNITIES

Three POSTDOCTORAL FELLOWSHIPS in neuroscience are available immediately at the Laboratory of Cellular and Molecular Retinal Physiology, INSERM-Louis Pasteur University, in Strasbourg, France. The Fellowships are in the following fields: neurotrophic factors and photoreceptor survival, retinal stem cell biology, and retinal molecular synaptogenesis. Work in a friendly, constructive, and wellequipped university-hospital environment within the historic centre of Strasbourg. The Fellowships are all funded for three years. Interested candidates with strong expertise in cell biology, molecular biology, or electrophysiology should send curriculum vitae and bibliographies, together with two references, to: Laboratory of Cellular and Molecular Retinal Physiology, INSERM ULP E9918, Clinique Médicale A, Hopitaux Universitaires de Strasbourg, 1 Place de l'Hôpital, 67091 Strasbourg Cedex, France. Informal enquiries are welcome. Contact: Dr. David Hicks at e-mail: hicks@neurochem.u-strasbg.fr; Dr. José Sahel at e-mail: sahel@neurochem.ustrasbg.fr, or Dr. Serge Picaud at e-mail: picaud@ neurochem.u-strasbg.fr.

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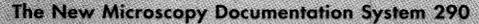
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