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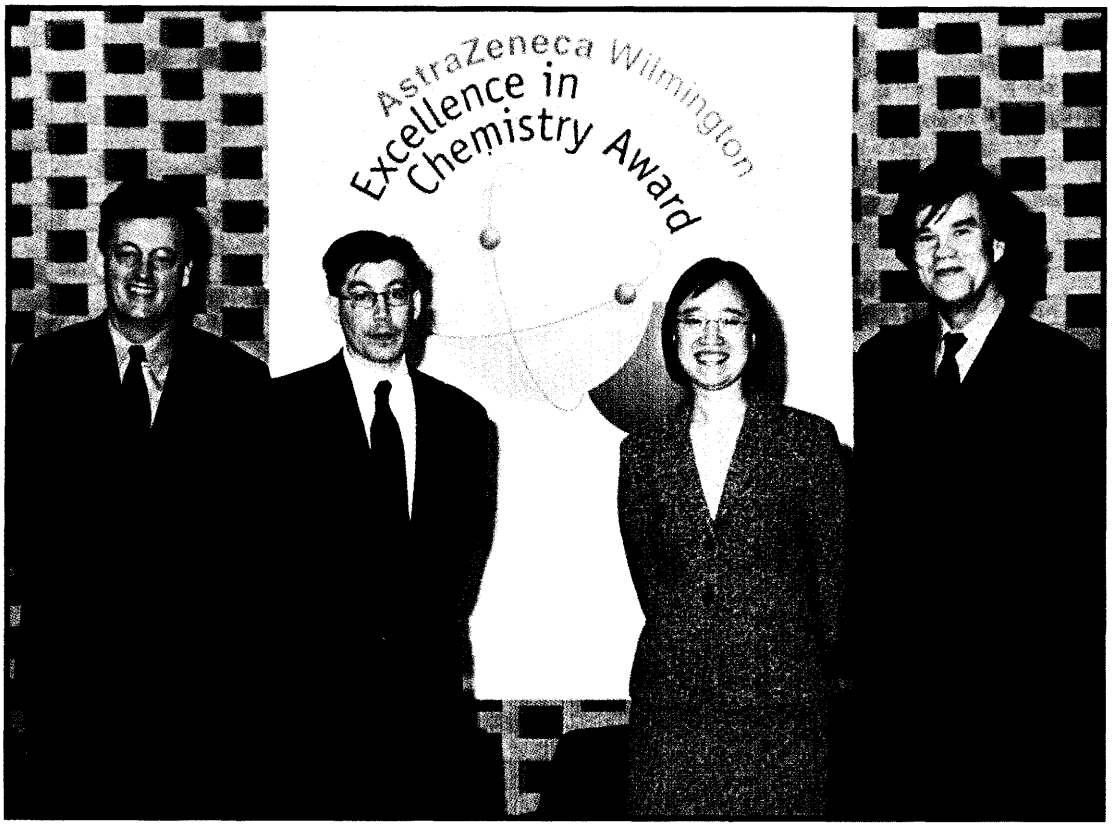

Pictured from left to right: David W.C. Macmillan, Erik J. Sorensen, Debbie Chen (Committee Chairperson) and Victor A. Snieckus

Awardees:

Professor David W. C. MacMillan
California Institute of Technology

Professor Erik J. Sorensen
The Scripps Research Institute

Distinguished Lecturer:

Professor Victor A. Snieckus
Queen's University

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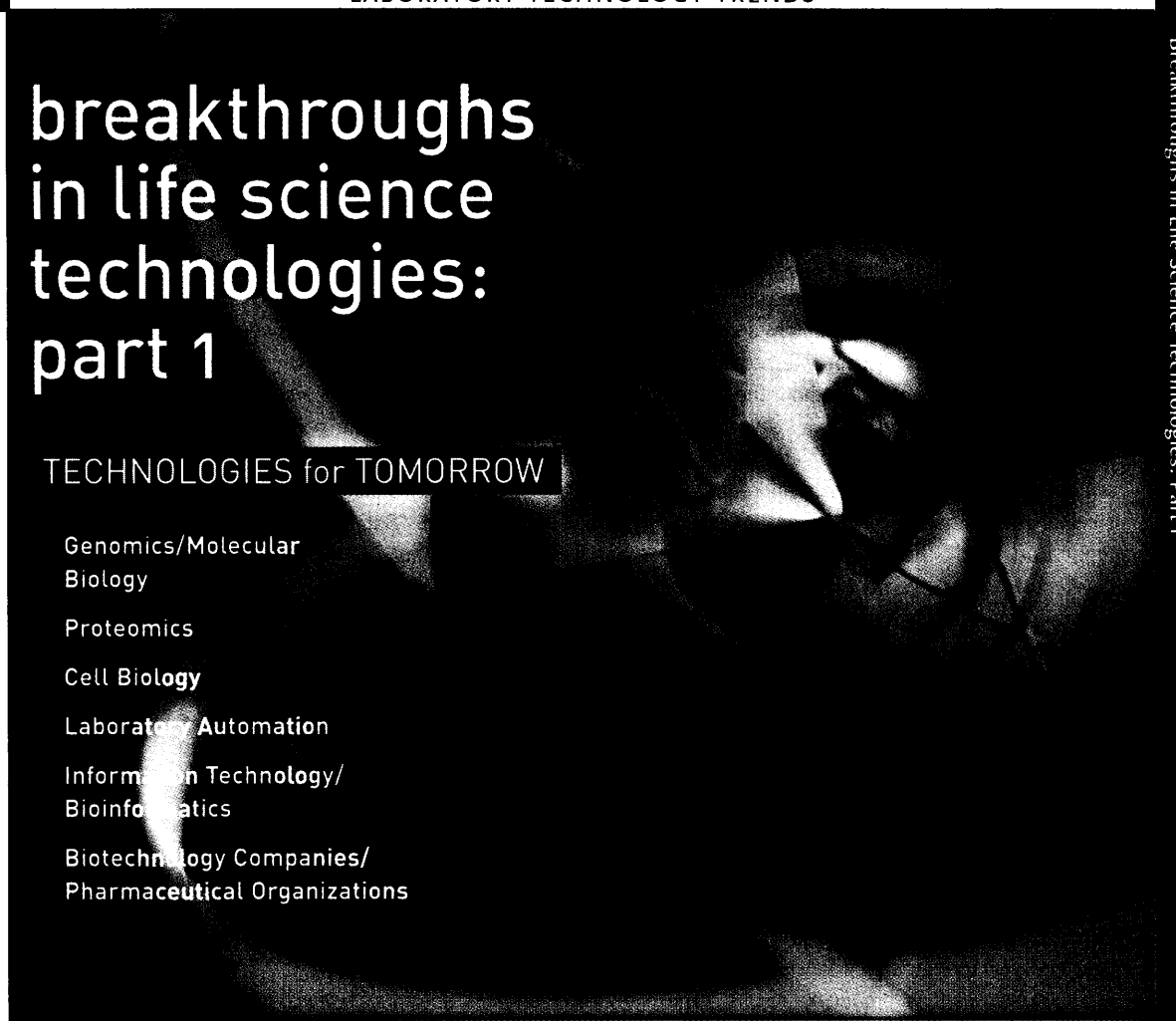
breakthroughs in life science technologies: part 1



TECHNOLOGIES for TOMORROW

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New tools and technologies have helped to stimulate advances that have transformed the world of life science in recent years. Similar contributions from the commercial sector will continue to spark advances in years to come.

BY PETER GWYNNE AND GARY HEEBNER

This is the first of a two-part series. The second part will appear in the 8 February 2002 issue of Science.

The companies in this article were selected at random. Their inclusion in this article does not indicate endorsement by either AAAS or *SCIENCE*, nor is it meant to imply that their products or services are superior to those of other companies.

The past half decade has seen a revolution of achievement in biology laboratories. A remarkable series of scientific advances has laid the foundation for new and deeper understanding of the nature of life and the application of that knowledge to healing and other forms of betterment for humanity. Sequencing of the genomes of humans and other organisms; advances in understanding the pathways involved in cancer; the discovery that neural cells can regenerate under certain conditions; the growth of understanding about how the nervous system stores information over longer periods of time. All represent recent, major additions to the fund of human knowledge.

As in previous years, the latest research achievements have stemmed from fresh, and often inspired, modes of thinking. But they have differed from past experience in two ways. Much of the recent inspiration has come from fields outside the traditional disciplines of life science. "I've seen the development of a much more quantitative view of life science, going from descriptive work to being able to manipulate data and draw it out quantitatively in a way that we couldn't in the past," says Rita Colwell, director of the **National Science Foundation** (NSF). Additionally, the development – and ready availability to researchers – of new tools, techniques, and technologies has accelerated the entire process. That contrasts with the do-it-yourself approach to instrumentation and other equipment that marked the research efforts of past eras. "New tools have made a huge difference to research in life science," adds Colwell. "For example, the ability to extract, purify, and analyze DNA in a very pure form has completely revolutionized the field of molecular biology."

This report will outline the ways in which new approaches and new technologies are transforming research in life science. It will examine the contributions of tools and techniques to both fundamental research and the translation of that research into applications. And it will highlight predictions about the types of advances that will occur in the next few years by thought leaders in academic, government, and industrial life science. A related report that will appear in the 8 February 2002 issue of *Science* will focus more closely on specific technologies that contribute to the continuing evolution of life science.

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breakthroughs in life science technologies: part 1

THE INDUSTRIAL IMPERATIVE

The commercial sector has increasingly provided the bases of investigation that researchers can use in their laboratories to advance specific disciplines of life science more rapidly and more surely. "Advances such as genome sequencing wouldn't have been possible without the advent of 'industrial strength' technology," says Donald Kennedy, emeritus professor of environmental science at **Stanford University** and editor-in-chief of this magazine. "The quality of instrumentation and the pace of technology development are especially high in the industry sector. A somewhat larger percentage of major advances than in the past will come out of industrial laboratories."

G. Stephen Burrill, CEO of venture capital firm **Burrill & Company**, agrees. "About 20 years ago, most people would argue, most research was done in academia, often supported by the **National Institutes of Health.** Industry followed up the research," he says. "Now private industry – pharmas, biotechnology firms, and informatic companies – are increasingly spending heavily on the research side."

That investment is producing results. "The first biotechnology based drug, **Eli Lilly's** Humulin, was approved for use in 1982," notes Gillian Woollett, associate vice president for biologics and biotechnology at the **Pharmaceutical Research and Manufacturers of America** (PhRMA). "Today there are 78 biotechnology drugs in the United States and the number is rising. Biotechnology is allowing us to do more difficult problems. We're doing things we couldn't even conceive of in the past."

The life science industry in general and the biotechnology business in particular have undergone their own changes in response to the changing nature of the research enterprise. "Firms don't go into biotechnology any more with the expectation of becoming drug companies," Woollett says. "A lot of the business models are now in expert services, such as selling data mining services rather than products." Burrill takes a similar view. "The period between when the fabulous basic science happens and is commercialized on any scale is not well understood," he points out. "But toolbox companies can make a quick profit."

INTEGRATION AND INFORMATION

The increased profile of industry in pure research coincides with a sea change in the nature of that research. "We are moving from a reductionist approach to more integrated science," says Wolfgang Sadee, professor and vice chair of pharmaceutical sciences at the **University of California, San Francisco** (UCSF). "We have come to the point at which we should put Humpty Dumpty back together again through an integrative approach. That's a complete rethinking."

Tikki Pangestu, director of research policy and cooperation at the **World Health Organization** (WHO), agrees. "I think there will be a move toward the whole area of systems biology – of understanding how things function together and function as an organism," he explains. "There has been a greater meshing of techniques than had been the case in the past," adds Frank Gannon, executive director of the **European Molecular Biology Organization**. "Interdisciplinary approaches are now beginning to happen. It's a tactical change that controls the experiments that people think of doing."

Integration, of necessity, brings the physical sciences into the life science lab. "The contributions of data manipulation with the computer and the application of mathematics to biology have led to huge breakthroughs," says NSF's Colwell. "I see biologists becoming able to incorporate advances in physics and mathematics into their subject."

Both life scientists and physical scientists will have to work hard to understand each others' points of view if the integration is to garner success. "Information technology and life science have to move much closer," warns Gannon. "The whole topic will have to be understood mutually by those from the computer world and from the life sciences." That will demand some kind of standardization. "In the next decade we'll go through an era of systems biology in which standards will need to evolve or be created that will help to pull disparate pieces together into an integrated system," says Burrill.

From one point of view, life science is undergoing a process of standardization. "We are filling up databases," says Philippe Kourilsky, director of France's **Pasteur Institute**. "Think of Mendeleev's classification of the elements. We're not only finding the elements but also putting some order into them."

Caroline Kovac, general manager of **IBM Life Sciences**, regards data handling as the key to modern life science. "The most singular point today that is different from the way in which we did biology up to five years ago is the variety of experimental techniques that can generate enormous amounts of data," she says. "Because of these changes in the nature of experimentation, we can no longer do biology without high-performance computing."

Frank Douglas, chief science officer and executive vice president of pharmaceutical company **Aventis**, amplifies that thought. "We can only do what we do with automation and the technical skills of bioinformatics specialists," he says. "In the old days a very skilled chemist could make 300 compounds a year. Now a combinatorial chemist can make hundreds of thousands. Informatics and bioinformatics enable us to evaluate the millions of data points that result. They give us the starting point so that we don't have to look for needles in the haystack."

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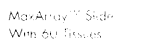

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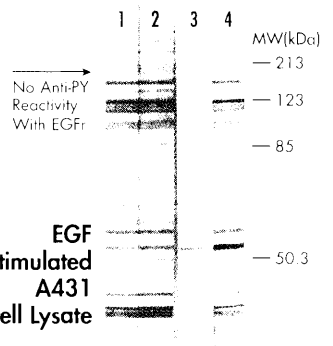

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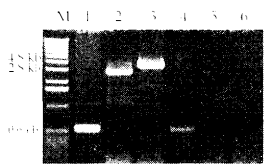
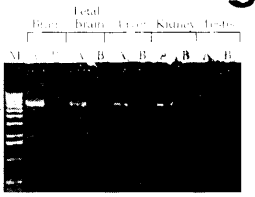


Rare, full-length genes were successfully amplified using Human Testis GETRare Full-length cDNA compared to that of corresponding non-enriched cDNA. Lanes 1–3: Human Testis Full-length cDNA. Lanes 4–6: Non-enriched cDNA. Lane 1 & 4: IL-10. Lane 2 & 5: p50. Lane 3 & 6: IGFR. Lane M: 1-kb DNA ladder.

or GETLarge



The large, titin gene (7.0 kb) was successfully amplified using Human GETLarge Full-length cDNA generated from different tissues; however, the titin gene was not amplified using other commercially available, non-enriched cDNA. Lane A: GETLarge cDNA. Lanes B: Competitor, non-enriched cDNA. LaneM: 1-kb DNA ladder.

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breakthroughs in life science technologies: part 1

THE GENOMIC FOUNDATION

The data that specialists in informatics interpret come from a variety of technologies and subdisciplines, many of them developed only in recent years. At present the most significant enterprise is genomics, the field that stems from the successful sequencing of organisms' genomes. "The evolution of genomic sequencing has really given us a whole new set of tools," says William Linton, president and CEO of **Promega Corporation**.

The field has broad applications. Drug discovery is the most obvious. "Molecular biology has laid the foundations of much of what is coming out now in medicine," says Sara Radcliffe, PhRMA's research director for biologics and biotechnology. "Genomics is telling us more." Agriculture also stands to benefit from genomics. "From the agricultural perspective we have really pushed the implementation and use of new tools, many of which have developed out of the genome projects, into agricultural problems," says David Fischhoff, co-president of **Cereon Genomics**. "We are focused on linking the functions of genes in plants to the characteristics that will be important in enhancing traits that will drive agricultural production in the future."

The polymerase chain reaction (PCR) and DNA microarrays have enabled much of the progress in genomics. Without PCR to amplify small amounts of DNA and microarrays to conduct large numbers of experiments, scientists would know much less about what the 30,000 or so genes believed to comprise the human genome actually do.

In theory, PCR should be quantitative: The number of templates should double with each cycle, resulting in an exponential increase in copies. If you know the number of templates in the starting or ending reaction, you should be able to work in either direction to calculate the result. In practice, this is not the case. Amplification can plateau, which changes the rate of increase. And variations in experimental conditions can lead to deviations from the theoretical result.

In conventional PCR, quantification requires either taking aliquots from a sample at given intervals, or using multiple samples. The amplification product would then be detected using gel electrophoresis or Southern blotting which are time-consuming procedures. Real-time PCR systems obviate these manual procedures.

The first instrument for real-time PCR was the ABI 7700 (or TaqMan), now offered by **Applied Biosystems**. **Roche Molecular Biochemicals** introduced its LightCycler at roughly the same time. These systems incorporate automated thermal cyclers with fluorimeters. That allows researchers to quantify the PCR products after each cycle. PCR kinetics can be monitored online in either system via a personal computer.

DNA chips and microarrays, meanwhile, have changed the way genomic research is conducted. These miniature devices allow researchers to carry out large numbers of experiments on a single small slide similar to those used in basic light microscopy. Companies that offer ready-to-use microarrays include **Affymetrix**, **BD Biosciences**, **CLONTECH**, **Genomic Solutions**, and **Mergen**. Other companies, such as **Beckman Coulter**, **Genetix Ltd.**, and **GeneMachines**, provide the basic tools needed for researchers interested in fabricating their own chips.

The field continues to evolve at a rapid pace. "I think some of the breakthroughs will come from the application of advanced materials sciences for nucleic acid and protein arrays," says Linton. Steve Fodor, CEO of Affymetrix, points to the extraordinary increase in the capacity of arrays. "Linear changes in the technology yield nonlinear – that is, squared – changes in the density of information," he explains.

THE PROMISE OF PROTEOMICS

Genomics research reached a plateau with the successful sequencing of the human genome. Now the life science community has set its sights on a new goal: understanding how the genome creates each specific protein that ultimately determines the function of a living cell. The vehicle is proteomics, the analysis and characterization of the proteins. By comparing the profiles of proteins expressed in a normal cell with those in a diseased cell, researchers hope to correlate disease states with specific protein expression. In turn, they can link this protein expression pattern to gene expression.

Profiling a cell's proteins presents significant challenges. Unlike their DNA counterparts, proteins cannot be amplified. Thus scientists must isolate and identify species of proteins that may be active in a cell but present at very low levels. "A key problem in proteomics boils down to high-speed purification and fractionation of proteins," says William Rich, president and CEO of **Ciphergen Biosystems, Inc.** "You need to be able to rapidly separate proteins into small, analyzable subpopulations with easy-to-use tools from benchtop scale through industrial-scale." Andrew Carr, CEO of **Amersham Biosciences** (formerly Amersham Pharmacia Biotech), makes a similar point. "The key is the industrialization of proteomics," he says. "The market in proteomics is growing very fast." Several companies, such as **Bio-Rad Laboratories**, carry both individual reagents and kits for protein isolation, providing researchers who aren't protein chemists with relatively simple tools for isolating proteins of interest without the need to develop a protocol from scratch.

Two-dimensional gel electrophoresis, originally introduced in the mid-1970s for separating pro-

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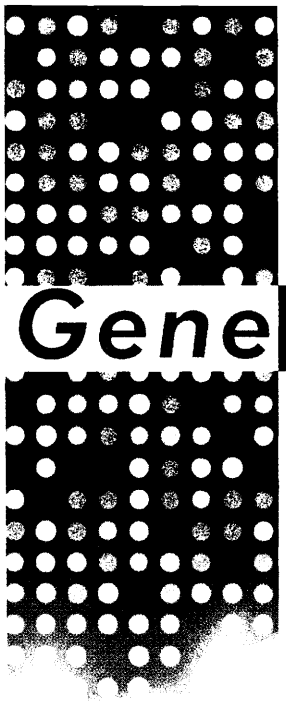

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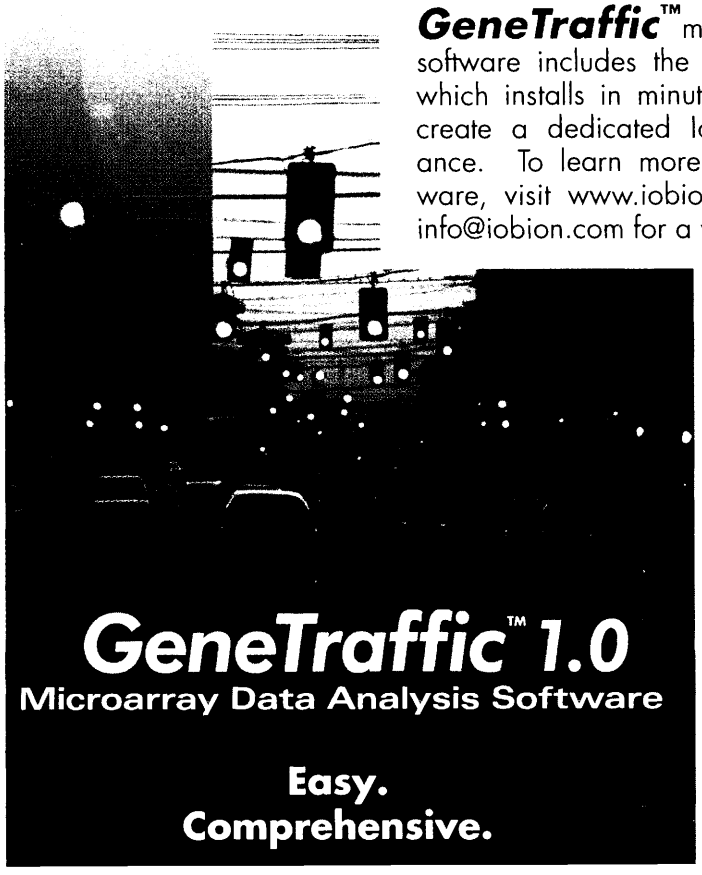

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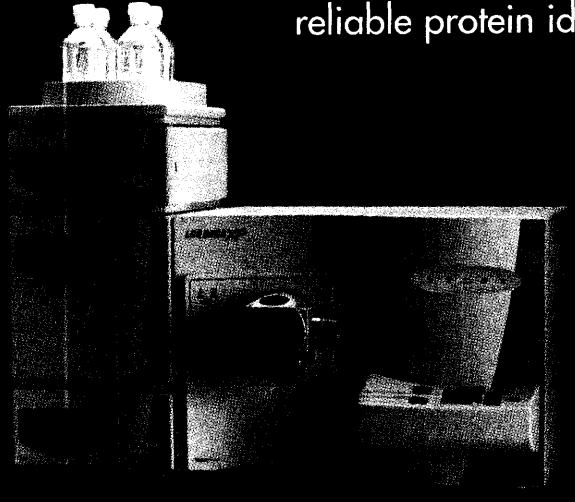

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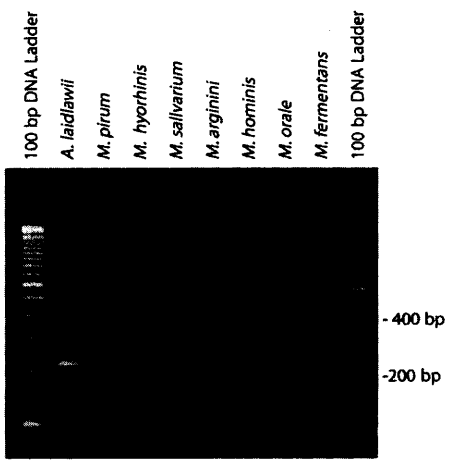

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breakthroughs in life science technologies: part 1

tein mixtures, helps. Systems consist of two types of gel electrophoresis. The first dimension is based on isoelectric focusing while the second uses a denaturing polyacrylamide gel matrix. Amersham Biosciences, Bio-Rad, and **Invitrogen** offer complete systems with the units, power supplies, and accessories required to separate mixtures of proteins. Analyzing the gel requires flatbed scanners and specialized software that permit the detection and documentation of the various protein profiles from each cellular extract. **Alpha Innotech**, Amersham Biosciences, and Bio-Rad offer systems for protein separation image analysis.

Two-dimensional gel electrophoresis continues to be a gold-standard tool in protein, and advances in using the technology continue to emerge. For example, Amersham Biosciences has developed a proprietary high throughput system called 2-D DIGE (differential in gel electrophoresis) that allows three samples to be run and compared simultaneously on a single 2-D gel.

Mass spectrometry has become an important tool in identifying individual proteins. Indeed, says Scott Patterson, vice president of proteomics at **Celera Genomics**, "It has enabled proteomics because of its ability to accurately measure small quantities of peptides and fragment them." Scientists can further analyze two-dimensional gel profiles using mass spectrometry and matrix-assisted laser desorption ionization time-of-flight techniques. The system first digests protein spots and then uses mass spectrometry to analyze the resulting peptides. Data gathered from the digest of a single protein spot can then be compared to properties of known proteins and an exact match or identification can be made for an individual protein. Overall, says Peter Meldrum, president and CEO of **Myriad Genetics, Inc.**, "We see the technology and science of mass spectrometry moving toward identifying pathways and protein complexes and also breaking them apart into their protein constituents."

Protein arrays represent a relatively new technology for studying proteins. They consist of large numbers of regularly arranged spots of elements that recognize a protein or proteins of interest. These elements might be antibodies or antigens, enzymes, substrates, or membrane receptors and ligands. Any biological protein assay that uses a specific ligand-receptor interaction can be miniaturized into a protein chip or array format. The technique permits scientific teams to monitor a cell's metabolism and response to external stimuli. Protein arrays are ideal for use in searching for pharmaceutically relevant targets and disease-specific marker proteins.

THE LATEST "OMIC"

As proteomics begins to take its place in research labs, a new type of "omic" is emerging. "The field of cellomics builds off the fields of genomics and proteomics," says Lans Taylor, president and CEO of **Cellomics, Inc.** "We view the cell as the window on life functions."

Basic to the study of any living cell is the use of cell culture media and reagents. To keep cells alive and well during experiments, researchers and such manufacturers as **BioWhittaker**, Invitrogen, and **StemCell Technologies** have developed several types of growth media, some of which do not contain any undefined components. These defined, or serum-free, media can be supplemented with growth factors to study the response of nerve and other cells to changing environments.

In the early 1970s BD Biosciences (then known as 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 on the basis of inherent cellular properties or fluorescent labels used to tag certain markers in or on the surface of specific cells. **Coulter Electronics** later introduced a flow cytometer with multiparameter sorting capability. BD Biosciences now focuses on the entire range of life science applications, from genomics to cell analysis. "We have a broad interdisciplinary approach to life science that includes high end instrumentation for multiparametric cell sorting, laser scanning cytometry for high throughput analyses, monoclonal antibodies for call labeling and proteomics, and internal markers for analyzing cell function," says David Litman, vice president of R&D and chief technology officer.

Cellomics, Inc. has focused on developing instruments for high content screening. This involves the automated measurement of such activities as morphological changes, apoptosis, adhesion, and protein trafficking in the living cell. These measurements add another layer of screening information to identify relevant information about the effects of compounds on cells. Coupled with software for image acquisition, analysis, data review, and data reporting, these instruments bring screening to a higher level. "Whole cell" systems of this type enable scientists to measure molecular interactions in the actual cellular environment and to evaluate drug penetration in whole cells. They also eliminate the need for protein purification and expression.

AUTOMATION, ROBOTICS, AND MICROSCOPY

Mechanistic advances have profoundly influenced the ability of researchers to produce and evaluate groups of genes, proteins, cells, and other compounds. High throughput screening, for example, significantly reduces the amount of time and materials required to produce and screen multiple samples. Combinatorial chemistry has made it possible to produce a large number of compounds with varying but related structures, which can then be screened for biological activity – perhaps as therapeutic agents.

Automation systems such as those offered by **Hamilton Company**, **Packard Bioscience** and **Zymark Corporation** also ease the individual scientist's burden. They usually interface hardware devices together to perform simple, specific laboratory procedures, such as filling microtiter plates with a substrate or other reagent. The functions are fixed and often specific to a particular task or experiment. In contrast, laboratory robotic systems can usually perform several functions and can be designed and programmed to meet any number of laboratory needs. The robot enables a computer to do physical work in addition to processing data.

Zymark uses a modular system of robotics, computers, and hardware that allows for the expansion of capabilities without obsolescence. Scientists can configure the system to use existing balances, titrators, or other instruments. "We have some of the foundational applied sciences that will allow scientists to do science rather than technology," says Kevin Hrusovsky, Zymark's president and CEO. "We've created an automation testing platform with a similar philosophy to today's per-

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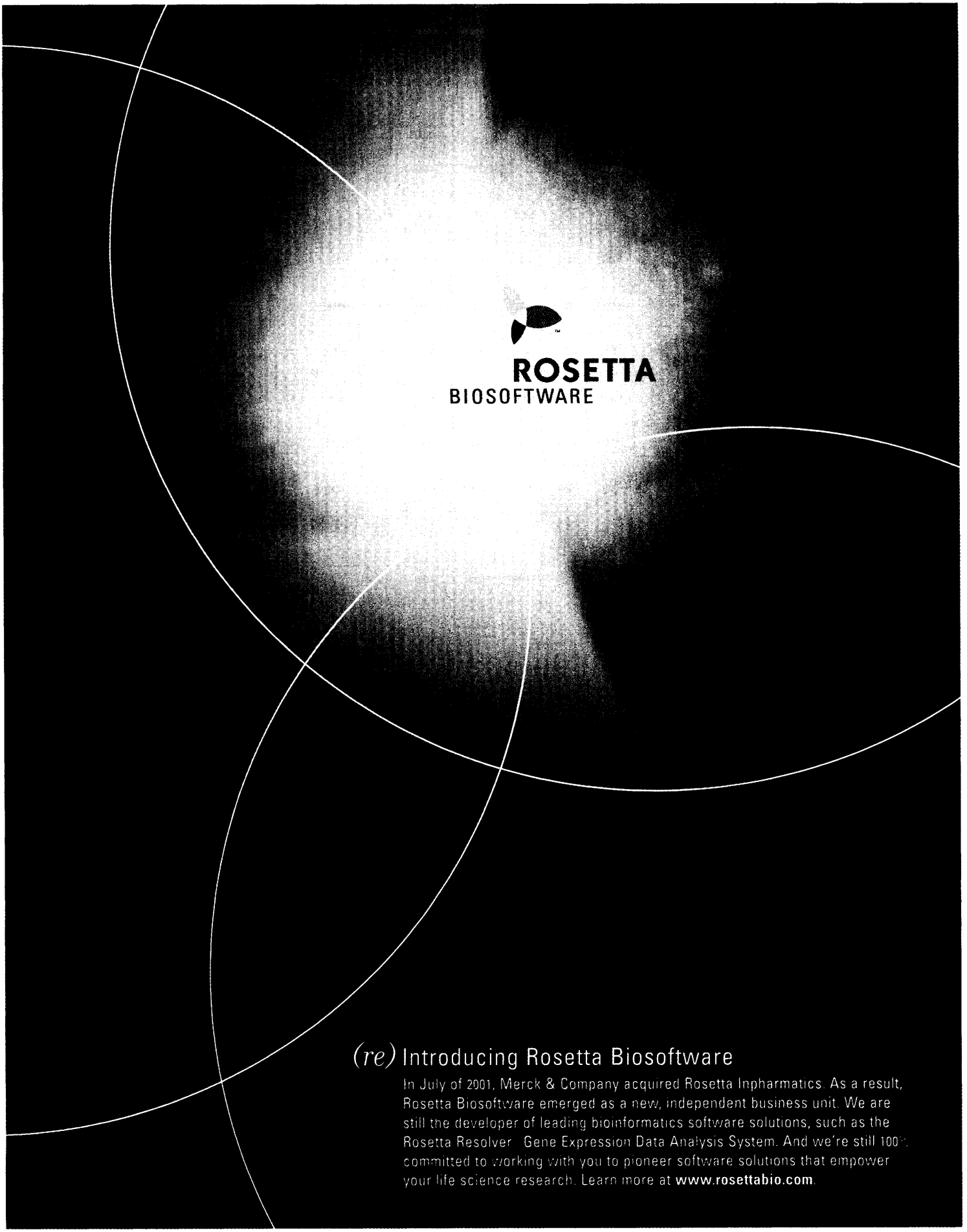

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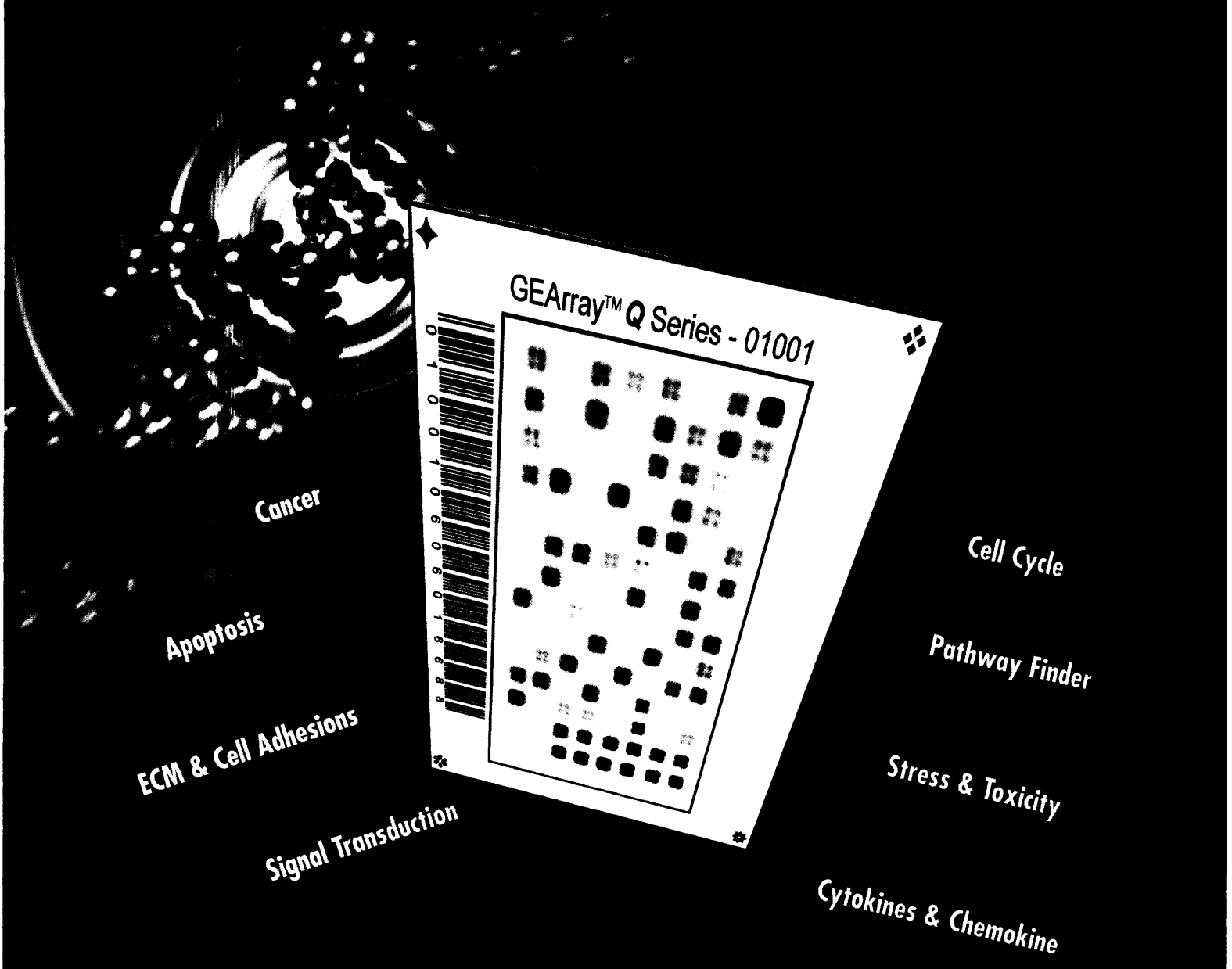

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sonal computer that scientists can use at their desks to gain the information necessary to make real time critical decisions from their discoveries rather than having to adapt their requirements and use a central department's mainframe."

Improvements in microscopy play increasingly significant roles in life science labs as investigations become more complex. New methods of microscopy have started to replace light instruments. "Fluorescent technologies will have a strong influence at the industrial level," says Norbert Gorny, board member of the **Carl Zeiss Group**, a leading manufacturer of microscope systems. "Biochips based on fluorescence will hit the market in the future," adds Augustin Siegel, the group's head of R&D. Other emerging methods include phase-contrast and dark-field microscopy, each of which simplifies the study of cells and subcellular structures. Other major producers of microscopes include **Leica**, **Nikon Instruments**, and **Olympus**. In addition to refining microscopes themselves, Carl Zeiss and these suppliers have developed digital camera systems and analytical software for data analysis.

DEALING WITH DATA

The initial efforts to sequence genomes revealed a significant, although not unwelcome, problem for researchers. The automated DNA sequencers, laboratory automation products, robotics, and high throughput screening tools that they used produced vast amounts of raw data. In response, software companies began to develop new platforms and programs to help the researchers to analyze the riot of information. Products and services on offer today often include access to proprietary databases that contain large volumes of sequence data. Some systems can be accessed through the Internet. That allows researchers to manipulate large data sets without needing to invest in extensive PC hardware.

Several specialist firms, including **Biomax Informatics GmbH**, **DoubleTwist**, and **Entigen**, offer suites of bioinformatics programs. **LION BioScience** provided Celera Genomics with bioinformatics tools and services for its sequencing of the human genome. LION also provides turn-key bioinformatics software solutions to major pharmaceutical companies, including **Bayer**. Other companies and departments choose, for reasons of security and reliability, to place their informatics software on their own corporate servers. They can obtain software packages designed for in-house use from **Informax**, **Molecular Mining Corporation** and **Oxford Molecular Group**, among other firms. These suppliers typically offer software programs for small laboratories as well as larger research organizations.

Faster computing translates into more analytical capability. For bioinformatics applications the volumes of data are taxing the computing power of many laboratory computer systems. Here, hardware enters the picture. **Compaq Computer Corporation**, Celera Genomics and the Department of Energy's **Sandia National Laboratory** are working together to create a new type of computer that can be used for biological applications. These partners hope that their research will lead to a building block for designs that can run a quadrillion operations per second.

Other manufacturers of computers and operating systems are allocating significant resources to life science and informatics. IBM and **Sun Microsystems** have created dedicated business groups to help service scientists who must deal with the explosion of biodata. IBM Life Sciences has gathered a team of specialists in information technology to develop integrated solutions for the laboratory in the areas of high-performance computing, fast recovery data storage, and data integration tools that permit single-query access across multiple data sources. "What's interesting is that biology is beginning to drive new models and new directions in high-performance computing," says IBM's Kovac. "Many of the problems in biology are 'embarrassingly parallel' – they can effectively be chopped up into lots of independent pieces and stitched together in the end. So loosely coupled clusters of computers make a model that seems to have great applicability to the life sciences."

As they become comfortable with computers, life scientists face a problem encountered by high-level computer users two decades ago: "High-performance computing must go hand in hand with an easy-to-use, interactive interface to mine and transform disparate data into information that can be accessed, visualized, and shared or integrated with other types of data in a meaningful fashion," says Shawn Green, CEO and founder of **LabBook, Inc.** "Data integration, smart access, and interactive visualization to targeted information is an integral part of the drug discovery process. LabBook focuses on solutions that allow researchers to access disparate data from all the disciplines in the life sciences and to integrate transparently, much in the way that **Microsoft's** .net strategy will revolutionize corporate efficiencies."

Because biological data can exist in many different formats, the analysis and extraction of meaningful information can be very difficult. "Bioinformatics is segregated into discrete areas, such as genomics and proteomics. Each discipline has its own set of tools and techniques and a small group of expert bioinformaticians, typically outside the research lab, who can operate them," says Green. "Yet our customers are conducting research that cuts across these boundaries, suggesting that the segments are limitations of the bioinformatics providers, not the researchers." In addition, different companies, colleges, and even laboratories format their data in their own unique ways.

Firms such as LabBook aim to simplify the job of comparing information from different sources by developing desktop platforms that unify data. However, the field plainly needs uniform standards that determine how information is housed and exchanged. An effort to set standards is now under way. At the BIO 2001 conference in June, an international consortium announced the formation of the **Interoperable Informatics Infrastructure Consortium**. This group consists of more than 40 companies in the life science and information technology businesses, among them IBM Life Sciences, LabBook, **Millennium Pharmaceuticals, Inc.**, and Sun Microsystems. The consortium's goal: to develop common protocols and interoperable technologies for data exchange and knowledge management relevant to the life science community.

WHAT NEXT?

What will these advances in instrumentation, technology, and informatics bring in coming years? Forecasting advances in life science is as difficult as predicting the next few years' Nobel laureates in medicine or physiology. Neverthe-

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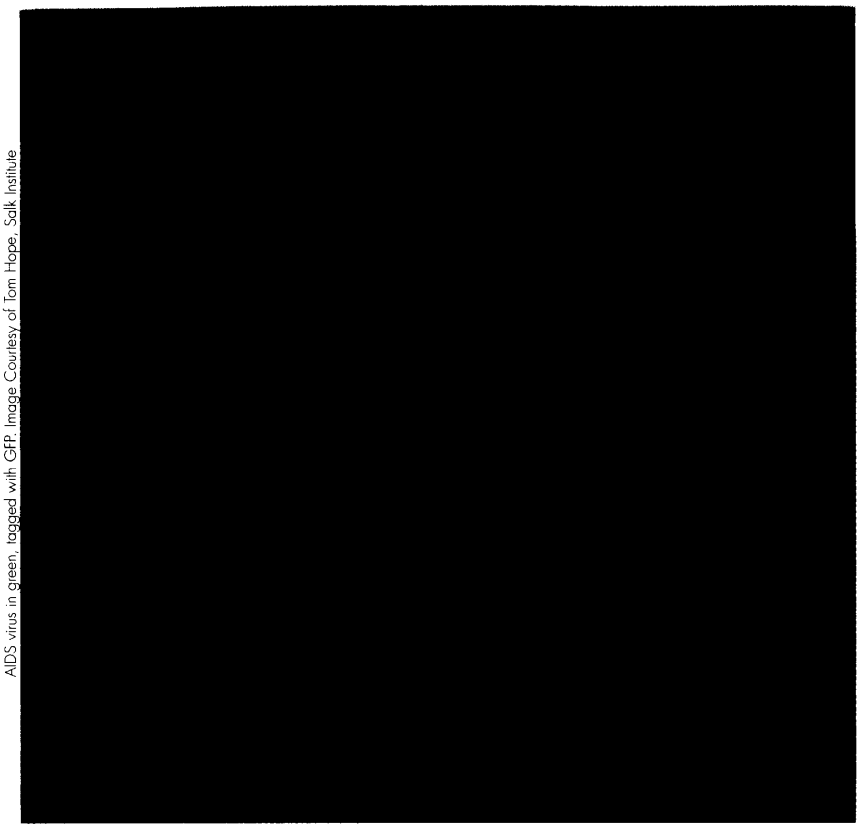

AIDS virus in green, tagged with GFP. Image Courtesy of Tom Hope, Salk Institute.

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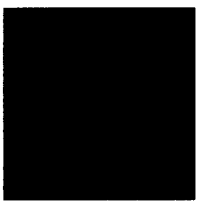

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less, the advances of recent years indicate some promising directions for tomorrow's life scientists. EMBO's Gannon foresees the advent of "differential proteomics," a field that will focus on the dynamic changes in proteins as they react inside cells. Douglas of Aventis forecasts that the ability to identify which specific receptor or enzyme is important in the creation of disease will help pharmaceutical researchers to determine what chemical structures are appropriate for binding at specific sites, and hence forming the bases of drug compounds. UCSF's Sadee predicts that in the not too distant future life scientists will be able to sequence individual humans' genomes on the fly, in doctors' offices, for example.

What about specific applications? Kourilsky of the Pasteur Institute is convinced that immunology is going to break through. "There's a chance that in a few years we can master, to an extent, the number of vaccines and procedures we need, particularly in cancer," he says. NSF's Colwell and Stanford's Kennedy agree that the new range of instrumentation and application will improve understanding of the environment. "I think the next really major achievements will be deciphering the complexity of the living system we call planet Earth," says Colwell. "As environmental issues become more and more important, there's going to be a huge applications domain for new understanding in ecology and population biology," Kennedy adds.

Thought leaders strike two cautionary notes among the aura of excitement. Kourilsky argues that life scientists must keep the general public accurately informed about their advances and ambitions. "I think the key to the future is the social understanding of science," he says. "Otherwise we may find a time when key advances are blocked." And WHO's Pangestu warns against the danger that advances in life science will create a new disparity among peoples. "Most scientific advancements have been driven by the west and are in danger of creating a genomic divide," he points out. "We are concerned that the divide will get bigger if we don't aim our research at the needs of people in developing countries."

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

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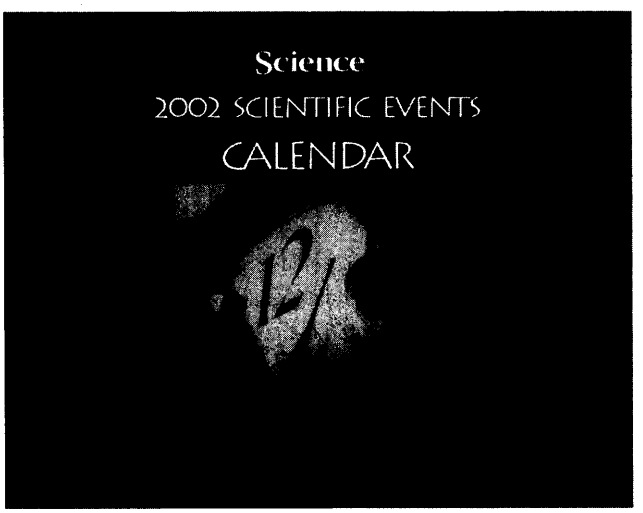

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Cell Biology

SEEING THE WHOLE PICTURE

BY PETER GWYNNE

CELL BIOLOGISTS TODAY PREDOMINANTLY CARRY OUT INTEGRATIVE BIOLOGY. BY APPLYING THE TOOLS OF GENETICS AND MOLECULAR BIOLOGY, THEY AIM FOR AN OVERALL UNDERSTANDING OF THE INTERRELATED FUNCTIONS OF CELLS AND ORGANISMS.

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With the world of life science research having entered its postgenomic era, cell biologists have become key characters in its continued development. Industrial and academic laboratories increasingly rely on them to cope with the complex issues of integration that will rest on the foundation of recent successes in genome sequencing.

A degree in cell biology at the bachelor's, master's, or doctoral level is not necessarily enough for successful employment. Many academic and industrial employers look for extra qualifications, such as a diversity of laboratory skills and hands-on experience in working on specific problems in cell biology. For industrial R&D in particular, it's also important that cell biologists possess a flexible turn of mind, so that they can move easily from one project to another, often in a different subspecialty of the field. And employers of all types insist that individuals need the communication skills that enable them to explain their work intelligibly to other scientists and even nonscientists.

Here we talk to representatives of two universities and three companies that recruit cell biologists. Their key message: Obtain specialist skills and laboratory experience as early in your academic training as you can.

ORA WEISZ

PITTSBURGH, Pennsylvania: "We always have postdoctoral positions available for cell biologists," says Ora Weisz, an associate professor in the renal electrolyte division at the University of Pittsburgh School of Medicine. "We're always looking for people with strong research backgrounds. Frankly, there seems to be a relative shortage of these applicants."

Weisz's laboratory performs research on a variety of topics that require skills in and an understanding of cell biology. The focus of the laboratory is the regulation of apical membrane traffic, including the role of acidification and phosphatidylinositol kinases in protein traffic, and assembly of the epithelial sodium channel in cells. Like similar research in other labs, she says, this work requires a very basic background in cell biology. Candidates can also benefit from specific skills in subbranches of the field. "Cell biology has moved on from the description of pathways to the understanding of methods," Weisz explains. "Anyone who has ability in signal transduction or cell imaging, for example, has a much better chance of success."

In general, Weisz looks for experience in the lab and enthusiasm for research rather than a specific background in the tools and techniques of cell biology. "The key factor is to have a good publication record in any field," she says. It's also useful to have a diverse set of skills at the bench, although not necessarily in cell biology. "We're interested in wet bench techniques – the standard skills of biochemistry and molecular biology – as well as basic computer skills," Weisz notes. "Applicants should have tried a lot of techniques and feel comfortable at the bench. They should also show a real interest in research."

Beyond scientific credentials, Weisz looks for intangible factors in would-be postdocs. "They should possess an ability to analyze data critically and a skepticism about their own results," she says. "They should be willing to interact with and teach other laboratory members. I expect them to show an eagerness to try new approaches. And they should have good organizational skills."

How should cell biologists at the undergraduate level on up prepare themselves for postdoctoral studies in the most prestigious departments? "Consider the direction in which cell biology is headed," advises Weisz. "Develop a set of skills broad enough to allow you to pursue interests at the cutting edge. And make sure that you keep current with the literature and watch what other people are doing to advance the field."

A former science editor of Newsweek, *Peter Gwynne writes about science and technology from his base on Cape Cod, Massachusetts, U.S.A.*

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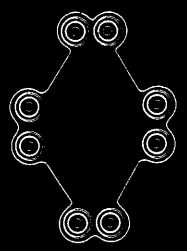

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Cell Biology

SEEING THE WHOLE PICTURE

JEANNINE NIACARIS

MENLO PARK, California: Biopharmaceutical firm Geron Corporation focuses on discovering, developing, and commercializing therapeutic and diagnostic products for applications in oncology and regenerative medicine and research tools for drug discovery. It has three complementary technology platforms: telomerase, human embryonic stem cells, and nuclear transfer. "Since a lot of our research is cell based, we are continuously looking for people with cell biology backgrounds," says Jeannine Niacaris, the company's vice president of human resources.

The firm expects applicants to have more than basic training in cell biology. "Our research is focused on specific types of cells," Niacaris explains. "Therefore we look for people with backgrounds in neural cells, for example, or hepatic cells, or cardiomyocytic cells." That requirement applies across all levels of training. "When we recruit we look for people with experience in various types of cells," she continues. "We want Ph.D.s who have worked in research similar to our own. We also hire associates with bachelor's and master's degrees. Like many small companies, we hope that we can find people who already have hands-on experience."

Geron takes scientific credentials into account when it recruits cell biologists. "For new Ph.D.s we still look at what school they went to and whom they worked with," says Niacaris. She expects all applicants to be able to work independently yet on a team, to have strong skills in experimentation, and to be able to interpret the data that they gather. A publication record in respectable journals is essential for Ph.D.s. "It's also important for bachelor's and master's level recruits to find opportunities to be on a publication list," she says. "Publications show that the science worked on is real. This is important in research like ours, which is still relatively new and unknown."

Requisitions submitted recently by Geron's hiring managers, Niacaris says, seek pretty much the same skill set: demonstrated experience, goal orientation, team orientation, the abilities to take charge, to work independently, and to multi-task, and flexibility. "I look for management skills," she adds. "So I'd like to see more scientists take electives that develop the management knowledge and skills that they will have to use as they take on more responsibilities within the company."

Equally important are applicants' verbal and presentational skills. "When we interview them we examine how good they are at explaining their projects and outlining what they have learned," Niacaris says. "I like to challenge scientists to explain to nonscientists what they do."

Niacaris advises cell biologists interested in industrial careers to undertake internships and other corporate opportunities to obtain hands-on experience while taking their degrees. "The challenge," she says, "is to get work experience while you are still going through school so that you can proactively look for positions in a company when you graduate." And beyond learning the basics, she adds, "have a passion for what you do."

STEVE HARRISON

EMERYVILLE, California: Chiron Corporation is a biotechnology firm that applies an integrated scientific approach to develop products for preventing and treating cancer and infectious diseases. It uses three platforms to support this effort: small molecules, protein therapeutics, and vaccines. A large proportion of the company's research demands the skills of cell biologists. "We use them in genomics, target identification and validation, determining mechanisms of action, and drug screening and evaluation," says Steve Harrison, director of *in vitro* biology in Chiron's small molecule drug discovery group.

The company expects recruits to possess more than a degree in cell biology. "We like our cell biologists to have specialized skills; typical examples include FACS analysis, high throughput assay development, expression profiling using microarrays, deriving and culturing primary cells, and developing surrogate assays for *in vivo* pharmacology," says Harrison. "We also need a demonstrated ability to do a variety of work. We need someone who can look at an antiproliferative molecule and then an antiangiogenic molecule and then do cell biology related to metabolic diseases."

Cell biologists wishing to join Chiron should therefore be quick studies and polymaths. "We like to have people who can get up and running reasonably quickly," Harrison says. "We emphasize the ability to do cell biology related to metabolic diseases. And we expect flexibility. Projects come and projects go. If you're lucky, your project will move into development. Or it might be abandoned. In either case you must be able to move rapidly to the next project as needs demand." A breadth of experience is also useful for recruits. "You don't have to have done all the

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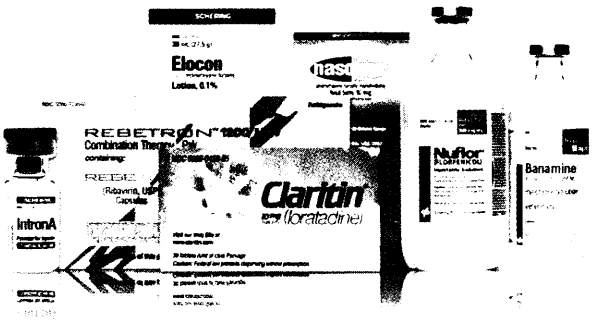

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The University of Wisconsin-Madison is inviting applications for more than 10 new faculty positions in neuroscience.

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- *spinal cord plasticity*
- *genetics*

The neuroscience community at the UW-Madison includes more than 150 faculty in 30 departments. Basic and translational neuroscientists on the Madison campus are pursuing investigations from molecular/cellular to behavioral and computational levels. The campus offers a rich environment for interdisciplinary collaborative research.

This hiring initiative seeks to promote interdisciplinary research. Candidates will have affiliations with one or more of the following UW-Madison centers:

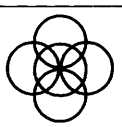
- *Center for Neuroscience*
- *Waisman Center (includes the W.M. Keck Laboratory for Functional Brain Imaging and Behavior and the Waisman Clinical Biomanufacturing Facility)*
- *Regional Primate Research Center*
- *UW Biotechnology Center*
- *Genome Center of Wisconsin*
- *Wisconsin Alzheimer's Institute*
- *Institute on Aging*

UNIVERSITY OF WISCONSIN MADISON

Applicants may be appointed at ranks appropriate for background and experience in departments including anatomy, comparative biosciences, medical genetics, medicine, neurology, neurological surgery, pathology, pharmacology, physiology, psychiatry, psychology, and zoology.

To learn more about these and other opportunities in neuroscience at the University of Wisconsin-Madison, visit our website—

http://www.neuroscience.wisc.edu



GENE THERAPY FOR NEUROLOGICAL DISORDERS FACULTY POSITION

University of Wisconsin-Madison

The Waisman Center at the University of Wisconsin-Madison is seeking a neuroscientist with a background in viral vector technology, and an interest in neurodegenerative diseases, for a new tenure-track faculty position. The incumbent will join a team of clinicians and scientists developing novel approaches for treating neurodegenerative disorders using stem cells, nonviral vectors, and growth factors. The UW-Madison has a diverse and expanding neuroscience community (**http://www.neuroscience.wisc.edu**).

The Waisman Center (**http://www.waisman.wisc.edu**), a focal point for interdisciplinary research in human development, developmental disabilities and neurodegenerative diseases, recently constructed a $25 million building for translational research programs focused on finding new treatments for disorders of the nervous system. The recruitment package will include space in the Waisman Center's new addition, which offers state-of-the-art research laboratories and technical support facilities, including animal care, histology, a brain imaging center with both PET and MRI technologies, and a manufacturing facility for the production of biopharmaceuticals for Phase I and II human clinical trials.

Assistant Professor-level applicants are preferred, but senior-level scientists are also encouraged to apply. Appropriate credentials may be M.D., Ph.D., or MD/PhD, with responsibilities including research, teaching, and other activities commensurate with background. The successful candidate should have a record of outstanding research achievements and the potential to develop a strong independent research program.

Applications will be reviewed starting on February 1, 2002. Submit curriculum vitae, a summary of research program goals, 3-5 recent publications and three letters of reference to:

Albee Messing, Co-chair, Search Committee
Rm. 713 Waisman Center
1500 Highland Ave
Madison WI 53705
messing@waisman.wisc.edu

BRAIN PLASTICITY IN HEALTH AND DISEASE FACULTY POSITION

University of Wisconsin-Madison

The Center for Neuroscience at the University of Wisconsin-Madison is seeking neuroscientists for 2 new tenure-track faculty positions in a new multi-investigator, interdisciplinary research program dedicated to "Brain Plasticity in Health and Disease". Areas of special interest include developmental plasticity, spinal cord plasticity and recovery of function, molecular and cellular mechanisms of learning and memory, sensory, perceptual, and cognitive plasticity, and computational neuroscience. Research programs investigating phenomena and mechanisms of plasticity at all levels of biological organization including clinical applications will be considered. These faculty positions are part of a new initiative for neuroscience at the University of Wisconsin-Madison (**http://www.neuroscience.wisc.edu**).

Assistant Professor-level applicants are preferred, but senior-level scientists are also encouraged to apply. Appropriate credentials may be M.D., Ph.D., or MD/PhD, with responsibilities including research, teaching, and other activities commensurate with background and experience. The successful candidate should have a record of outstanding research achievements and the potential to develop a strong independent research program.

Applications will be reviewed starting on February 1, 2002. Submit curriculum vitae, a summary of research program goals, 3-5 recent publications and three letters of reference to:

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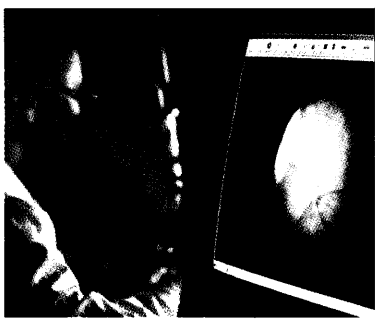

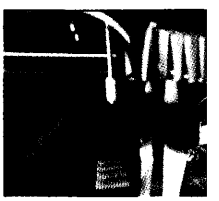

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We are seeking a Scientist who will lead research and development teams in the Oncology Department with the goal of using cell models and gene knockout mouse models to search and functionally characterize drugable target genes which will be used to develop new drugs for human cancer therapy. Individuals will be expected to have extremely strong research experiences in cancer biology and cancer therapeutic reagent development using cell and animal models. Qualified candidates must possess a Ph.D. in a life science field with at least 3 years industry experience in the research and development of cancer therapeutic targets using cell and animal models.

Scientist, Immunology - The Woodlands, TX
We are seeking a Scientist who will design and execute studies to evaluate the function of genes of interest to Immunology. The candidate chosen for the position must possess expertise in tissue grafting, bone marrow transplantation, or inflammatory models to provide *in vivo* data for projects adopted by the Immunology group. Qualified candidates must possess a Ph.D. in Immunology or related field and 3-5 years of relevant laboratory experience.

Associate Director, Scientist and Research Associates, Biochemistry - The Woodlands, TX
We seek talented individuals to bolster our biochemistry efforts to establish assays for high throughput screens of Lexicon's novel, biologically validated, drug targets. Candidates with experience identifying novel enzyme substrates and mechanisms of action as well as determining ligands of orphan receptors are encouraged to apply. Experience applying analytical methods such as extraction of biological materials, HPLC, TLC, SPR, affinity CE, MS, 2-D PAGE, and 2-hybrid analysis to conduct studies such as binding measurements, candidate testing, consensus determination, and metabolic profiling is desired. Broad familiarity with functional genomics approaches to biochemical analysis, a strong background in pharmacology, and supervisory experience are distinct pluses. Successful candidates will have a demonstrated record of outstanding accomplishment, excellent communications skills, and be team players.

Research Associates and Scientists, Medicinal Chemistry - Princeton, NJ
Several positions are available for Scientists with an M.S. or Ph.D. and 3 or more years experience in a drug discovery setting. In addition to state-of-the-art expertise in laboratory, separations and analytical technologies, successful candidates will have the capacity to work independently within a highly focused team environment and demonstrate leadership, creativity, and adaptability in their scientific work.

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LEXICON

Cell Biology SEEING THE WHOLE PICTURE

tasks that the company requires," Harrison continues. "But you should demonstrate your ability to learn and carry out new ones."

The company looks for specific nonscientific skills when it hires cell biologists. "Working as a team is very important, so collegiality is a must," says Harrison. "Since we expect our employees to understand and present their data, good communication is a plus. And because everyone is very busy, it is important that employees show initiative and have the ability to find help wherever it is available."

Harrison has three pieces of advice for cell biologists who want to pursue jobs in industry. "Understand the needs of the company to which you are applying – by talking to current employees, for example," he suggests. "At your interview, provide detailed examples of work that you have performed that is relevant to the new environment. And be honest about your experience; if you don't yet have a skill, express a willingness to learn."


LAWRENCE BLOCH

SAN DIEGO, California: When Applied Molecular Evolution (AME) went public in July of last year, it had 27 employees. Since then the number has doubled twice, to roughly 95. Cell biology plays a large role in the company, which aims to apply directed molecular evolution to the improvement of health care. "We want to get the best-of-breed cell biologists," says Lawrence Bloch, chief financial officer and vice president of business development.

Alain Vasserot, AME's associate director of research, outlines specific tasks for incoming cell biologists. "We focus on improving the functions of proteins. We spend a fair amount of time verifying that the functions we have modified offer benefit," he explains. "We are looking for cell biologists to develop assays for the process of verification. We look for backgrounds in signal transduction and the ability to characterize functions."

AME also seeks cell biologists for its wholly owned subsidiary Novasite Pharmaceuticals. "Novasite's technology allows an assay to be done on a single cell," says Bloch. "Cell biologists will be critical in defining the structure-function relationships."

The company hires worldwide at all levels of training from bachelor's degree-holders to postdoctoral fellows. "We look at recruits' accomplishments, such as the number of publications and the journals in which they have published," says Vasserot. "In telephone interviews we ask applicants to describe projects they've been involved in. Taken together, it gives us a fair idea of their future potential."

Commercial experience can be useful. However, Bloch adds, "Too much experience – in academe or industry – can mean that you're too wedded to one approach. We need a balance." That balance has particular value in partnerships with academic institutions such as the Scripps Research Institute. "We have academic collaborations but we work on mission-critical projects," explains Bloch.


ALAIN VASSEROT

Collegiality and leadership play important parts in selection. "We like to hire Ph.D. and postdoc scientists and give them hiring capability for lab technicians and associates," Bloch says. "It's important that groups headed by Ph.D.s should be complementary in terms of skills and personal chemistry. Public speaking and presentational skills are very important for scientists who will lead teams with collaborators."

Recruits can pick up some skills after they join the company. "We have a tuition reimbursement program for people to continue their education," Bloch explains. "We also send them to local leadership programs that provide training in management skills."


ELAINE FUCHS

CHICAGO, Illinois: "Cell biology is at the center of virtually all aspects of biology," says Elaine Fuchs, Amgen professor of basic sciences at the University of Chicago and president of the American Society for Cell Biology. "The exploration of genomes and research on embryonic stem cells, which are very hot topics for this century, absolutely rely on cell biology to move forward."

Fuchs, a Howard Hughes Medical Institute investigator, encourages applicants for postdoctoral fellowships in her laboratory to take a broad view of cell biology, but also to choose research problems narrow enough in scope to tackle experimentally. "It's important to ask a question that you find interesting and then pick a system – in our case skin biology – that is best suited to addressing that problem experimentally," she says. "If done thoughtfully, this approach will not only likely reward the student or postdoc with the pleasures of discovery, but it will also open the pleasures of job opportunities to them down the road."

In selecting postdoctoral fellows, Fuchs puts great emphasis on collegiality, communication ability, and interaction skills. "My entire laboratory interviews the candidates to decide who will fit best into our environment," she says. "We're searching for young research scientists who have excellent technical and intellectual expertise and also a feel for teamwork. Science requires curiosity. If scientists are naturally curious about the research of others, they tend to be more highly motivated about their own research problems. We look for scientists who can fit into a community." Curiosity should also drive job searches. "Take an active interest in the places at which you interview," Fuchs asserts. "Be excited about what's going on there."

Motivation is a major key for cell biology students. "It's a long haul and it's important that you be focused and motivated when you go through your training," Fuchs advises. "It teaches you skills that won't leave you once you're infected with the bug of excitement." To expand the aura of excitement, she recommends that cell biologists try out new approaches when they make the transition from graduate to postgraduate work. "If you have an exciting problem, change the system – from fruit flies, say, to plants or humans," she suggests. "Alternatively, stay with the system and change the problem. By exposing yourself to new approaches during your training, you prepare yourself for a future of addressing the questions that you feel most passionate about rather than sticking only to those questions the you feel technically comfortable in facing." ■

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The successful candidate will join or lead a group focused on the discovery of chemical and physical characterization of proteins, including the determination of microheterogeneity and post-translational modification. Preferred candidate will also have a familiarity with analytical concerns relating to IND filing. (job code 11134)

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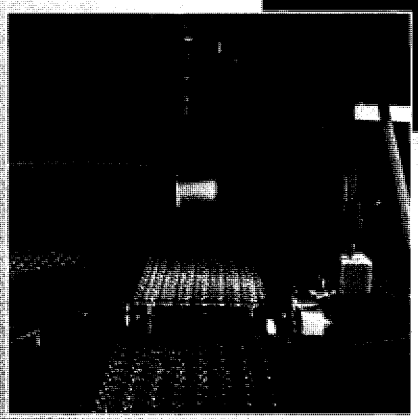

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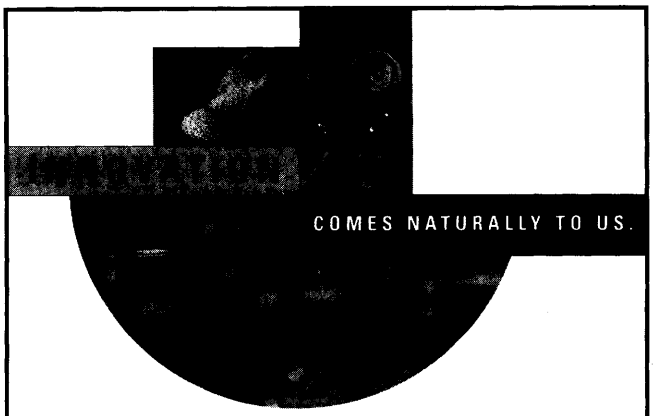

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University of Heidelberg, Im Neuenheimer Feld 282
D-69120 Heidelberg, Germany
Fax: +49 6221 546824,
email: mcb@zmbh.uni-heidelberg.de
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NCI SCIENTIFIC REVIEW ADMINISTRATORS

The **Grants Review Branch** in the Division of Extramural Activities of the **National Cancer Institute** (NCI), the largest component of the National Institutes of Health, has several immediate openings for **Experts** to serve as **Scientific Review Administrators** to manage all aspects of the scientific peer review process for grant applications submitted to the NCI. **Candidates should have independent research experience in current methods of cancer research in (1) Clinical immunology related to cancer pathogenesis or treatment, OR (2) Translational and/or clinical research in cancer biology, detection, diagnosis and/or treatment.** Candidates should also be familiar with the NIH grant application review and support process. These positions are based in Rockville, Maryland, a suburb of Washington DC, but some travel (site visits) will be involved.

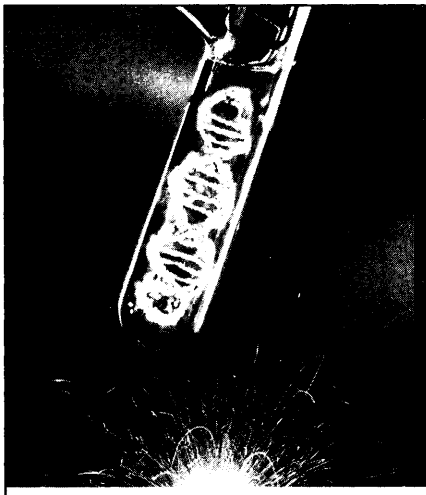
The Title 42 Expert Appointment mechanism allows the NCI and the successful candidates additional flexibility, including:

- rapid appointment process, with relocation package;
- flexibility in setting initial compensation levels;
- initial appointments for periods up to 5 years, with unlimited extensions in increments of up to 5 years;
- more flexible levels and frequency of salary increases; and
- full comparability in fringe benefits and pension plan with the Civil Service

Salary levels will generally be in the GS 13-14 equivalent ranges, currently $63,211- $97,108, depending on qualifications. Applications will be accepted for consideration until the positions are filled. Please send a current CV or Resume with bibliography and references to:

Olivia Preble Bartlett, Ph.D.
Chief, Grants Review Branch
Division of Extramural Activities,
National Cancer Institute
Fax: 301-496-6497
E-Mail: op2t@nih.gov

Selection for these positions will be based on merit, with no discrimination for non-merit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability. The NCI/NIH is an Equal Opportunity Employer. Previous applicants do not need to reapply.



INITIATIVE SPARKS INITIATIVE.

Innovation works at Biogen. The creativity and ambition of our workplace sparks our teams to take responsibility, move on intelligent risks, and drive innovative decisions that are changing not only the science of medicine, but the lives of people with serious diseases. If you're ignited by taking initiative, you'll meet your match at Biogen.

SCIENTIST
EXPLORATORY SCIENCES

Biogen seeks an innovative scientist to investigate activity and dissect mechanism of action of novel therapeutic proteins. This individual will have knowledge and experience in inflammation and immunology and/or biological systems of cell development and differentiation. Experience in the use of *in vitro* mammalian cell culture systems and a strong background in molecular genetic approaches to *in vivo* modeling with the ability to characterize transgenic and knockout mice are required. A PhD and at least 3 years postdoctoral experience is desired. Job Code RC-722-SCI

SCIENTIST
IMMUNOLOGY

We seek an innovative scientist with a strong background in immunology to investigate the activity and dissect the mechanism of action of novel therapeutic proteins. You should have strong skills in B cell biology, cellular immunology (both *in vivo* and *in vitro*) and knowledge of costimulatory pathways. The successful candidate will have a PhD and 0-2 years postdoctoral/professional experience. Job Code RC-456-SCI

SCIENTIST
ASSAY DEVELOPMENT, DRUG DEVELOPMENT

We are seeking a highly motivated individual with expertise in inflammation and neurobiology. Major responsibilities include developing specialized assays that characterize the mechanism of action of potential therapeutics and evaluating new assay technologies and potential therapeutic targets. Requires a PhD in Biochemistry or Cell Biology, 1-3 years of experience in drug development, and a broad understanding of cell-cell signaling and fluorescence-based technologies. Supervisory experience is a plus. Job Code: RC-B001-SCI

Visit **www.biogen.com** for details on all of our exciting career opportunities in both Cambridge, Massachusetts, and Research Triangle Park, North Carolina.

Foster your initiative and creativity at Biogen. We have one of the strongest financial profiles in the industry and our compensation and benefits package, including equity participation, is unmatched. For consideration, please forward your resume, indicating appropriate Job Code, to Biogen, Inc., Attn: Human Resources, 14 Cambridge Center, Cambridge, MA 02142; email: resumes@biogen.com (Job Code ONLY must appear in the subject line). Biogen is an Equal Opportunity Employer. No phone calls, please.

www.biogen.com

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Assistant Professor (2)

University of Massachusetts Boston

Environmental, Coastal and Ocean Sciences (ECOS) Department

The Environmental, Coastal and Ocean Sciences Department (http://www.es.umb.edu) invites applicants for two tenure-track Assistant Professor positions:

Environmental Risk Management/Communication: Applicants are expected to have expertise in public health and ecological risk protocols, risk management strategies, and a strong interest in marine environmental dynamics. The applicant should also have expertise in graphic display and information management techniques, risk and uncertainty, and integrated environmental assessment. Qualifications: Ph.D. in related discipline. Search 675.

Ecotoxicology/Coastal Ecology: Applicants must have a strong foundation in ecological theory/experimentation and a background that ties together the fields of ecology and environmental toxicology. The individual must have interests in understanding and managing the effects of natural and human perturbations on linked watershed-coastal or coastal-marine ecosystems. The applicant's specific research area should target the population, community or ecosystem levels of biological organization and should demonstrate the application of strong quantitative skills. Qualifications: Ph.D. with post-doctoral experience. Search 680.

Applicants for both positions must have a fundamental commitment to join a multidisciplinary faculty that emphasizes linkages between the social and natural sciences. Preference will be given to candidates with a sincere commitment to interdisciplinary research who are willing to both initiate and participate in team-based research projects and whose research complements research by other UMB faculty. Applicants must have a well-conceived research and teaching program capable of supporting graduate research through external funding. Teaching responsibilities include supervising graduate students and offering graduate courses; a desire to contribute to undergraduate teaching would be viewed positively. Send a cover letter that includes statements of interests and goals in research and teaching, a c.v., and three letters of reference to: **University of Massachusetts Boston, Human Resources, Search #, 100 Morrissey Blvd., Boston, MA 02125.** *Application review will begin on January 5, 2002, and continue until position is filled. An Affirmative Action, Equal Opportunity, Title IX employer.*

University of Massachusetts Boston
UMASS. www.umb.edu

MIT

PLANETARY SCIENCE FACULTY

The Department of Earth, Atmospheric, and Planetary Sciences at MIT invites applications for a faculty position in the area of planetary science. Rank and salary are open, but we particularly encourage potential junior faculty to apply. We seek creative applicants with broad research interests who have a strong understanding of fundamental physical processes. The position is open to outstanding candidates in all areas of planetary science; the areas of solar system formation and planetary evolution are of particular interest. The applicant may have any focus: theoretical, experimental, or observational. Applicants capable of initiating and/or taking full advantage of future spacecraft opportunities are encouraged to apply. MIT facilities include the Center for Space Research and a share of the two 6.5 meter telescopes of the Magellan Consortium. Interest in teaching at the graduate and undergraduate level is essential at MIT.

Interested individuals should send curriculum vita and names of three references to: **Ron Prinn, Department Head, Department of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology, 54-918, 77 Massachusetts Avenue, Cambridge, MA, 02139-4307.**

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
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web.mit.edu/personnel/www

Tenure-Track Positions in Biochemistry and Green Chemistry

The Department of Chemistry at the University of Massachusetts Boston invites applications for tenure-track positions in both Biochemistry and Green Chemistry. A Ph.D. in Chemistry or Biochemistry is required. And post-doctoral or industrial experience is desirable. For the Biochemistry position, the area of research is open and preference will be given to applicants who are interested in teaching undergraduate biochemistry lecture and lab. For the Green Chemistry position, the area of specialty is open with the understanding that the successful candidate's research and teaching philosophy will mirror the viewpoints put forth by the Twelve Principles of Green Chemistry. The science faculty at UMass Boston recognizes the importance of interdisciplinary research and both positions offer exciting opportunities to collaborate across disciplinary and departmental boundaries. The candidates are expected to pursue external funding to support an active research program and have a strong commitment to teaching at both undergraduate and graduate levels. UMass Boston offers both MS and ACS-Certified BS degrees in Chemistry as well as our new Ph.D. in Green Chemistry. For more information, please visit our web site at http://www.chem.umb.edu or email questions to virginia.mackay@umb.edu.

Please send a letter of application, curriculum vitae, three letters of reference, as well as a statement of your teaching philosophy and detailed research plan that addresses your goals and objectives at both the undergraduate and graduate level to: **University of Massachusetts Boston, Human Resources, Search 685, 100 Morrissey Blvd., Boston, MA 02125.** Application review will begin December 15, 2001. Minorities and women are encouraged to apply.

An Affirmative Action, Equal Opportunity, Title IX employer.

University of Massachusetts Boston
UMASS www.umb.edu

MIT

SENIOR RESEARCH SCIENTIST

The Department of Nuclear Engineering invites applications for a senior research scientist position in the area of statistical physics of microscopic transport in porous media, particularly theoretical studies of nuclear magnetic resonance investigations of porous and granular media. Responsibilities will include teaching graduate courses in low energy nuclear physics and in microscopic theory of transport.

Requirements: A Ph.D. in an engineering or physical sciences discipline and an extensive track record of excellence in research.

To apply, applicants should send curriculum vitae, description of research interests, and the names of three references by December 31 to: **Massachusetts Institute of Technology, Department of Nuclear Engineering, Faculty Search, Building 24-124, 77 Massachusetts Ave., Cambridge, MA 02139-4307.**

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
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TENURE-TRACK FACULTY POSITION

ASSISTANT PROFESSOR FACULTY POSITION. The Department of Carcinogenesis at The University of Texas M. D. Anderson Cancer Center, Science Park - Research Division, is completing a new recruitment phase and expansion into new laboratories. Applications are being accepted for a tenure-track faculty position at the Assistant Professor level from individuals with 3-5 years postdoctoral or independent research experience and strong publication record. We seek applicants working in the general area of molecular and genetic mechanisms underlying cancer development. Preference will be given to applicants who complement existing research strengths in the department, which include animal model development (including transgenic and knockout mice), DNA repair, signal transduction, cell cycle control, apoptosis, hormonal and environmental carcinogenesis, genomics/proteomics, and chemoprevention. Successful applicants will be expected to establish high-quality, independent research programs and participate in our graduate training program. The Science Park - Research Division is located in a rural park-like setting in Smithville, Texas, just outside of the state capitol of Austin, in the beautiful Texas hill country. Ongoing research activities of the faculty are described in our website at http://sciencepark.mdanderson.org/. Excellent start-up funds, salary, and benefits package will be provided as well as access to numerous state-of-the-art equipment, communication, research and service facilities.

Submit curriculum vitae, two representative publications, a brief outline of current and future research plans, and three letters of reference by **January 15, 2002** to: **Dr. David G. Johnson, Chair, Search Committee, c/o Mrs. Mary Lou Fendley, UT M. D. Anderson Cancer Center, Science Park - Research Division, P.O. Box 389, Smithville, TX 78957.**

THE UNIVERSITY OF TEXAS
MD ANDERSON
CANCER CENTER
Making Cancer History™

The University of Texas M. D. Anderson Cancer Center values diversity in its broadest sense. Diversity works at M. D. Anderson. EEO/AA Smoke-free environment.

Purdue University
Walther Professor
Purdue Cancer Center

The Purdue Cancer Center, the Walther Cancer Institute, and the Department of Medicinal Chemistry and Molecular Pharmacology at Purdue University invite applications from outstanding cancer investigators to fill the new senior level position of **Walther Professor**. We are seeking candidates with a distinguished record of scholarly and scientific accomplishment in basic cancer research, a vigorous, extramurally funded research program and a commitment to teaching excellence. Applicants must hold a Ph.D. or equivalent degree and be of sufficient stature and accomplishment to be appointed to a tenured position at the level of Associate or Full Professor. The successful candidate will join a large and vibrant community of life science researchers across the Purdue campus and will be expected to play an important leadership role in the NCI-designated Purdue Cancer Center.

Founded in 1978, the Cancer Center fosters interdisciplinary research focused in three program areas: Experimental Therapeutics and Diagnostics, Structural Biology, and Cell Growth and Differentiation. The candidate may have research interests in one of these areas, or in any area of cancer research as it is most broadly defined. In partnership with the Walther Cancer Institute, the Cancer Center is undergoing a major campus-wide expansion in basic cancer research. This individual's primary academic appointment will be in the Department of Medicinal Chemistry and Molecular Pharmacology, a diverse, research-oriented department that ranks among the best of its kind in the nation. For more information about the Purdue Cancer Center, the Walther Cancer Institute and the department, see www.cancer.purdue.edu, www.walther.org and www.pharmacy.purdue.edu/~mcmp/.

Applicants should submit a complete curriculum vitae and the names of three references to: **Dr. Robert L. Geahlen, Chair, Search Committee, Purdue Cancer Center, Hansen Life Sciences Research Building, Purdue University, West Lafayette, IN 47907-1524.** Preliminary, confidential inquiries are permitted (geahlen@purdue.edu). Applications will be considered until the position is filled.

Purdue University is an Equal Opportunity/Equal Access/Affirmative Action Employer and encourages the nomination and application of women and minority candidates.

OMRF

Molecular & Cell Biology
STAFF POSITION

The Program in Molecular and Cell Biology at the Oklahoma Medical Research Foundation invites applications for a scientific staff (faculty) position. We are especially interested in applicants at the early stages of their research careers. All applicants must have completed postdoctoral training with a strong record of research accomplishment and should be prepared to develop a vigorous, independent research program combining molecular biological with genetic, biochemical, or structural approaches to basic biological problems.
Research areas are flexible, the specific interests of the applicants being subordinate to their potential as investigators. The following research areas are currently represented in the program (mcbi.ouhsc.edu); applicants with complementary interests are especially encouraged to apply.

- Structural and regulatory biology of type IV secretion in prokaryotic cells **(Dr. Philip Silverman)**,
- Organelle dynamics and membrane trafficking in *Dictyostelium discoideum* **(Dr. Margaret Clarke)**,
- Genetic control of neurotransmitter synthesis and neural differentiation in the nematode C. *elegans* **(Dr. James Rand)**,
- Molecular basis of meiotic chromosome behavior in yeast and mammalian cells **(Dr. Michael Dresser)**,
- Genomics and muscle differentiation in C. *elegans* **(Dr. Robert Barstead)**
- Regulation of synaptic transmission in *C. elegans* **(Dr. Ken Miller)**

The OMRF maintains an environment optimal for research (www.omrf.ouhsc.edu).The Foundation offers competitive, hard money salaries, a discretionary research allocation for each laboratory, and unusually good scientific and administrative services.

The Molecular and Cell Biology Program is housed in facilities organized to provide every aid and advantage to investigators in the early stages of their research careers. Generous startup funds, items of large equipment, technician (or postdoctoral) salaries, consumable supplies, glasswashing and secretarial services are all provided. Successful applicants will be expected presently to supplement OMRF support with significant extramural funding.

The OMRF is a privately supported, biomedical research institution in Oklahoma City. Foundation staff may hold adjunct appointments at the adjacent University of Oklahoma Health Sciences Center or at the nearby Norman campus of the University of Oklahoma. EOE/AA employer.

Applications

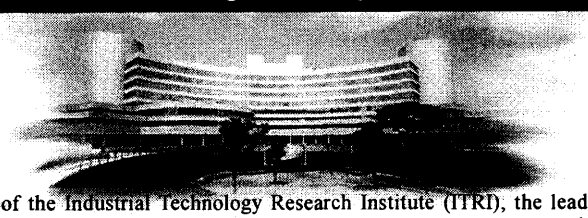
Applications should consist of a C.V., a ***brief*** statement of research experience, research plans, and the names of three references. Submit all material to:

Philip M. Silverman
Head, Molecular and Cell Biology Program
Oklahoma Medical Research Foundation
825 N. E. 13th Street
Oklahoma City, OK 73104

Informal inquiries can be addressed to:
silvermanp@omrf.ouhsc.edu

Innovative Technologies for Better Life

Biomedical Engineering Center , ITRI



Biomedical Engineering Center (BMEC) of the Industrial Technology Research Institute (ITRI), the leading integrated biomedical engineering R&D institute in Taiwan, ROC, has created exceptional career opportunities for motivated research scientists, technology and business managers. Positions are open on:

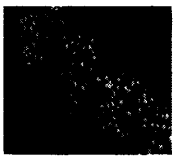
Technical Directors

Ph.D. with at least 5 years of working experiences in Biology, Pharmacology, Genomics/Proteomics, Medical Engineering, Tissue Engineering or related fields, with the global vision and enthusiasm in Biotech development and commercialization and 3 years of managerial experiences preferred.

Technical Managers and Project Leaders

Ph.D. with at least 3 years of working experiences in one of following fields.

New Drug Development & Virtual screening	Bioinformatics
Molecular Diagnostics, Bio Photonics	Stem Cell & Developmental Biology
Genomics & Proteomics	Tissue Engineering and Biomaterials



Business Managers

MBA or equivalent, having at least 2 years of experiences in biotech or related industry.

The rapidly expanding BMEC is located in Hsinchu, 45 miles south of Taipei. The center has 250 scientists and engineers including 80 Ph.D. and 120 MS. Adjacent to National Tsing Hua University, National Chiao Tung University and Science-Based Industrial Park, the institute offers an excellent R&D environment and fast growing opportunities for technology innovation and commercialization.

Web Address: http://www.bmec.itri.org.tw

Please send your resume to:

Ms. Luan-Ying Wei, Personnel, Biomedical Engineering Center, ITRI
195-85 Section 4, Chung Hsing Rd., Bldg53, 2F
Chutung, Hsinchu, Taiwan, ROC
Tel:886 3 591-2179 Fax:886 3 591-0098 E-mail :900486@itri.org.tw

Industrial Technology Research Institute
Biomedical Engineering Center

LUDWIG INSTITUTE FOR CANCER RESEARCH

DIRECTOR

Office of Communications

The Ludwig Institute for Cancer Research (LICR), an international not-for-profit research organization with 800 employees in 14 different countries, seeks individuals to help staff a newly forming Office of Communications at the Institute's New York office.

The Director of the Office of Communications will be responsible for working with the Institute's senior administrators and scientists to articulate the goals, philosophy, activities, and achievements of the LICR in the field of cancer research and therapy. The Director will also be responsible for developing and implementing an integrated strategy for communicating scientific information to the public, the LICR staff, as well as to potential academic and commercial partners.

The successful Director candidate will have excellent verbal and written skills, and understanding and appreciation of laboratory and clinical science. A higher degree (Ph.D., M.D.) is desirable but not essential. Preference will be given to candidates with experience as a writer or journalist (print or electronic media), or as a public information or public relations officer. The candidate must also be capable of identifying, engaging, and coordinating writers capable of communicating to a broad array of constituencies.

The Director reports to the Chief Executive Officer of the LICR. As a senior member of the administrative staff, she/he will play an important role in helping to chart and communicate the LICR's dynamic and rapidly growing world-wide research enterprise.

The LICR is an equal opportunity employer. We offer highly competitive salaries and excellent benefits.

More information about the LICR can be found on our website (www.licr.org). Applications containing a curriculum vitae and a brief explanation of interest and qualifications should be sent to:**Ms. Nancy Leyrer, Ludwig Institute for Cancer Research, 605 Third Avenue, New York, NY 10158. Phone: 212-450-1512; Fax: 212-450-1515. Email: nleyrer@licr.org**

Freie Universität Berlin

Full Professor in Veterinary Biochemistry

Department of Veterinary Medicine

Applications are invited for the tenured position of Full Professor in Veterinary Biochemistry.The successful candidate will be required to provide teaching and research in the said area.

In line with article 100 of the Berlin Higher Education Act (Berliner Hochschulgesetz), a postdoctoral lecturing qualification (Habilitation) in Biochemistry or comparable qualifications for a teaching career in higher education are required.

The successful candidate will have several years teaching experience and is expected to co-operate with colleagues in the research groups of the department. She/he will have expertise in the areas of cell biology or molecular endocrinology, in securing external funding, in managing externally funded projects and have international experience in teaching and research.

In general, the language of instruction will be German, but some activities may be offered in English. Non-German speaking applicants will be expected to learn German within two years.

The Freie Universität Berlin is an equal opportunities employer.

The successful candidate will be offered civil servant or public sector employee status (Professor Grade "C4 " according to the German system).

Applications must reach the Freie Universität Berlin, Fachbereich Veterinärmedizin, Dean Prof. Dr. M. F. G. Schmidt, Oertzenweg 19b, 14163 Berlin, Germany **not later than 6 weeks** after the publication of this advertisement. Applications should include the following: a letter describing your interest in the position and pertinent experience, a curriculum vitae, the names and addresses of three referees, a list of publications, and copies of the certificates of academic qualifications held.

The Freie Universität Berlin is a state-funded university. It has some 40,000 students and 520 professors. The University has 12 departments structured into more than 100 institutes. Detailed information is available at the following web-sites: **www.fu-berlin.de and www.vetmed.fu-berlin.de**

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Rouses Point is an ideal location for working and living: moderate housing costs, good schools, no traffic, and a family-oriented environment. Located along Lake Champlain in northeastern New York, the area offers year-round, scenic, recreational opportunities, such as skiing, snow mobiling, sailing, water skiing, fishing, hiking, golfing and camping. **Rouses Point** also offers convenient access to Montreal. To discover the tremendous quality of life in **Rouses Point,** please visit: ***roundthebend.com as well as northcountrychamber.com.***

At **Wyeth,** we have set ourselves apart from the others in the pharmaceutical industry by discovering and developing exceptional pharmaceutical, vaccine and nutritional products. Our strong name becomes even stronger when linked to our outstanding over-the-counter products such as Advil®, Robitussin®, Dimetapp®, ChapStick®, Anbesol® and more. Our superior research, manufacturing, sales and marketing are the result of the effort of our employees united in a shared vision - leading the way for a healthier world. Join our team as one of the following:

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Manager, Applied Technology

Driving the success of GlaxoSmithKline – the world's leading pharmaceutical organization - is a continual search for innovation. Apart from a research and development capability that sets the benchmark for our industry, we're committed to recruiting and retaining the best and brightest by providing unequalled individual and career development opportunities within our organization.

In this leadership role, you will set up and oversee a team of engineers, scientists, designers, and/or technicians in the design, construction and consultancy of novel laboratory equipment to meet unique scientific needs, while ensuring all aspects of services offered comply with both GSK and regulatory safety and FDA Good Laboratory Practices. You will also develop and utilize the services and expertise of outside consultants, contract companies and specialized contractors to supplement the capabilities of the in-house staff. Your advanced degree in Physics or a related applied discipline is highly desirable, as is at least 10 years of relevant post graduate experience in the design, modification and/or utilization of advanced laboratory equipment or similar complex, high precision equipment.

GlaxoSmithKline is dedicated to an innovative workplace and supports you with career long opportunities and learning. We offer a competitive benefits and compensation package designed to attract and retain the very best. For confidential consideration and efficient processing, visit our Web site: www.gsk.com Indicating Job Code: 01-1746 is essential to search. Principals only, no agencies please.

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DIRECTOR/NINE FACULTY
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 committed substantial resources to the Center including funds for the recruitment of nine new faculty including a Director. It is anticipated that the primary specialization areas of the new faculty will collectively span the fields of computer science, mathematics and statistics, molecular biology, molecular evolution/phylogeny, and biochemistry. The primary responsibility of the new faculty will be to lead a nationally visible research program in selected areas of computational genomics, proteomics, and molecular evolution, complementing existing strengths at the University of Maryland. Candidates for the Director position are expected to be senior Researchers with prominent recognition in these areas. All the new faculty will be housed in contiguous space set aside for the Center and will have access to significant high-end computing infrastructure through the University of Maryland Institute for Advanced Computer Studies. Each will also be affiliated with at least one other campus academic unit appropriate to her/his interests. There is ample potential for collaboration with other outstanding bioinformatics research groups nearby in organizations such as NIH, Celera, TIGR, the Maryland Biotechnology Institute, and the Smithsonian Institution. To apply, send a letter of application, curriculum vitae, and URL for additional information to **e-mail: cecilia@umiacs.umd.edu** and have at least three letters of recommendation sent to:

Cecilia Kullman
Center for Bioinformatics and Computational Biology
Institute for Advanced Computer Studies
2131 A.V. Williams Building
University of Maryland
College Park, MD 20742
Website:
http://www.umiacs.umd.edu/centers/bio.htm

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.

ASSISTANT PROFESSOR GEOMICROBIOLOGY

Hamilton College, a selective liberal arts college located in upstate New York, invites applications for a tenure-track Assistant Professor in geomicrobiology starting in July 2002. The candidate will teach microbiology, an upper-level elective in the field of geomicrobiology, and an interdisciplinary seminar. The successful candidate will be expected to develop an independent research program in geomicrobiology that includes opportunities for undergraduate research, and supervision of senior research projects will be expected. Ph.D. in microbiology with geoscience applications such as microbial systems in extreme environments is required; postdoctoral and teaching experience are preferred. This interdisciplinary appointment will be based in the Biology Department **(website: http://www.bio.hamilton.edu)** but interaction with the geology faculty and the environmental studies program is expected. Submit curriculum vitae; statements of teaching philosophy/experience and research interests; three letters of recommendation; and graduate transcripts by January 10, 2002, to:

Chair
Search Committee in Geomicrobiology
Hamilton College
198 College Hill Road
Clinton, NY 13323

Hamilton College is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minority candidates.

POSITIONS OPEN

PROFESSOR AND DIRECTOR
Center For Research in Infectious Diseases
Virology and Immunology
Children's Research Institute (CRI)
Children's National Medical Center (CNMC)
Washington, D.C.

The Children's Research Institute of the Children's National Medical Center and The George Washington University is recruiting a Scientist with a nationally recognized research program in the area of infectious diseases, virology, and immunology. While all areas of research relevant to viral and microbial disease will be considered, there is particular interest in recruiting an individual interested in approaches that employ genomics and proteomics. Opportunities exist for collaborations with colleagues at the Center for Functional Genomics at CRI (**Eric Hoffman, Director**) and the other research centers comprising the CRI, George Washington University (GWUMC), and its affiliate, The Institute for Genomics Research (TIGR). Applicants should hold an earned Doctorate (Ph.D., M.D., or the equivalent); hold the rank of **ASSOCIATE PROFESSOR** or higher, and have an existing, extramurally funded research program. Generous newly constructed laboratory space with a panoramic view of Washington, D.C., outstanding start-up package; dependents educational benefits; salary; and recruitment slots for additional junior faculty will be provided. CRI/CNMC is located in the northwest section of Washington, D.C., and within a short driving distance from a Metro station, GWUMC, NIH, and TIGR as well as the new bioinformatics campus of the Howard Hughes Medical Institute. Interested applicants should send relevant curriculum vitae, a two-page statement of interest and future directions, and names and addresses of three references to:

Search Committee
The George Washington University
Ross Hall, Room 736
2300 Eye Street N.W.
Washington, DC 20037
E-mail: mtmpjh@gwumc.edu

CNMC is an Equal Employment Opportunity Commission Employer.

COLUMBIA UNIVERSITY DEPARTMENT OF CHEMICAL ENGINEERING

The Department of Chemical Engineering announces a tenure-track opening to be filled at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level by September 2002. Applicants at the senior level will also be considered. A Doctorate in chemical engineering or a related field is required, and postdoctoral experience is desirable. The Department seeks a Biological Engineer with research interests in cellular/metabolic engineering, tissue engineering, biomaterials, genomics, protein engineering/interactions, biosensors, artificial organs, or biophysics. Successful candidates are expected to develop research programs that build on existing institutional strengths and are collaborative, innovative, and capable of attracting external support. Columbia offers an attractive, collaborative environment for biological engineering research including a chemical engineering department with strong research efforts in soft materials; a new biomedical engineering department with research activities in cellular/metabolic engineering, biomechanics, and medical imaging; a genomics research center with a joint appointment in chemical engineering; and a world-class research hospital. Candidates should submit a plan of research; statement of teaching objectives demonstrating an awareness of and commitment to chemical engineering education; three letters of recommendation; curriculum vitae, and several reprints of recent, noteworthy research publications. Reply by January 15, 2002, to: **BioSearch Committee, c/o Professor C. J. Durning, Vice Chair, Chemical Engineering, Columbia University, 500 West 120th Street, MC 4721, New York, NY 10027.** *Columbia University is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

The Pratt School of Engineering, through the Department of Mechanical Engineering and Materials Science and the Department of Biomedical Engineering, invites applications for a tenure-track faculty position. Applications are invited from candidates with research interests in materials science, particularly with an emphasis on bioinspired materials. Candidates should have a background in one or more of the following areas: the synthesis of bioinspired materials, their macromolecular characterization, processing of these materials at the meso- to microscale, and measuring and modeling their structure and properties by *ab initio* and/or molecular dynamics simulation. Successful candidates are expected to have an established research record, be capable of obtaining competitive external research funding, and actively participate in teaching at both the undergraduate and graduate levels. A tenure-track appointment at the **ASSISTANT PROFESSOR** level is anticipated, but appointments at the **ASSOCIATE** or **FULL PROFESSOR** level with tenure are available for exceptional applicants. Because of the multidisciplinary nature of this new thrust, a degree in engineering is not necessarily required, although the candidates must demonstrate their ability to teach engineering students within their broad area of expertise. The Pratt School of Engineering is currently undergoing a period of significant growth in human and physical resources, driven by a highly successful capital campaign and a transforming endowment to name the engineering school. Applicants should submit a cover letter (e-mail, address, and telephone number must be included) describing their interests and qualifications and curriculum vitae along with the names and addresses of three references to: **Chair, Materials Faculty Search Committee, Department of Mechanical Engineering and Materials Science, Duke University, Box 90300, Durham, NC 27708-0300.** *Duke University is an Affirmative Action/Equal Opportunity Employer.*

TENURE-TRACK POSITION
Microbial Pathogenesis

Original advertisement was posted the week of September 11, 2001, and listed a deadline of December 31, 2001, for consideration. We are extending the deadline per this announcement. Applicants are being sought for a tenure-track faculty position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level in Richmond, Virginia. Applicants should have a Ph.D. or equivalent, a record of research accomplishments, and an interest in graduate and medical education. Strong consideration will be given to candidates that apply modern molecular, genomic, and systemwide approaches to the understanding of infectious diseases mechanisms. For additional information, see **website: http://views.vcu.edu/micro/.** Interested candidates should submit curriculum vitae, a statement of current and future research interests, and arrange to have at least three letters of reference sent to: **Dr. Dennis Ohman** and **Search Committee, Department of Microbiology and Immunology, P.O. Box 980678, Medical College of Virginia Campus, Virginia Commonwealth University, Richmond, VA 23298-0678. E-mail: deohman@hsc.vcu.edu.** Applications will be reviewed upon receipt and considered until January 31, 2002. *VCU is a culturally diverse, Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities are encouraged to apply.*

FACULTY POSITION
Vaccine Research Institute of San Diego

A new faculty position is available. Expertise in vaccines, immunology, bacteriology, virology, parasitology, or neurology is being sought. Both junior and senior Investigators will be considered. An excellent publication record and success in obtaining outside funding required. Applicants should send curriculum vitae, statement of research accomplishments, plan of future research efforts, and three letters of reference to: **Tom Phillips, D.V.M., Ph.D., Chairman and Vice President, Vaccine Research Institute of San Diego, 3030 Science Park Road, Suite 100, San Diego, CA 92121.**

Senior Faculty Position
Department of Biochemistry & Molecular Biology
University of Oklahoma Health Sciences Center

The Department of Biochemistry & Molecular Biology at the University of Oklahoma Health Sciences Center invites applications from established investigators with outstanding research accomplishments for a tenured position at the rank of Associate or Full Professor. The successful candidate will be expected to have an active and competitive research program, an international reputation, a distinguished record of scholarly achievement, and demonstrated excellence in teaching with a commitment to graduate and medical education. The Department has grown considerably since 1994 under the leadership of the Chair Dr. Paul Weigel and now includes 19 full-time faculty members and 8 Adjunct faculty with active, and well-funded research programs with grant support >$15 million TDC. In addition, the Department has established core facilities in crystallography, mass spectrometry and glycobiology. Members of the Department helped to establish the Oklahoma Center for Medical Glycobiology (OCMG) to study protein-carbohydrate interactions and the biological roles of glycoconjugates. Recently, OUHSC was named an NIH Resource Core within the "Consortium for Functional Glycomics." There are six colleges and four hospitals in the University of Oklahoma Health Sciences Center and the OU Medical Center, located on a 200-acre modern campus in Oklahoma City, with over 3300 students and 2200 faculty. The Oklahoma Medical Research Foundation with its excellent researchers and facilities is also located within the OU Medical Center complex. An adjacent Biotechnology Park with three large buildings supporting research/development as well as a $23 million Biomedical Research Center have been completed in the last few years.

Applications should include a cover letter, *curriculum vitae*, outline of current and future research activities, and names of three references. The Search Committee will review applications as they are received and will continue to consider applications until the position is filled. Applications should be sent to: **RICHARD D. CUMMINGS, Ph.D., CHAIR, Search Committee, Department of Biochemistry & Molecular Biology, University of Oklahoma Health Sciences Center, P.O. Box 26901, BRC 417, Oklahoma City, OK 73190. http://w3.ouhsc.edu/biochem/**

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

POSTDOCTORAL POSITIONS AVAILABLE

Two postdoctoral positions are available to study lipid trafficking and organelle biogenesis in *S. cerevisiae*. Current projects include identifying and characterizing novel proteins involved in sterol transport from the plasma membrane to the ER and developing new genetic and imaging approaches for studying lipid trafficking. Candidates must have a strong background in cell biology. Please send a C.V. and the names of three references to:

Will Prinz
Laboratory of Cell Biochemistry and Biology
NIH/NIDDK
Building 8, Room 402
8 Center Drive
Bethesda, MD, 20892
fax (301) 496-9431
williamp@intra.niddk.nih.gov.

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Postdoctoral Fellow, Molecular Oncology

You will define molecular mechanisms of apoptosis induced by deprivation of growth factors and exposure to cytotoxic agents, such as chemotherapeutic drugs. Your work will involve the generation and analysis of knockout mice and protein structure function studies (see Nature 388:728-729, 2000; Science 277: 815-818, 1997; Science 276: 111-113, 1997; Science 275:1122-1126, 1997; Nature 385: 86-89, 1997; Science 281:1305-1308, 1998; Science 290:523-527, 2000; Cell 103: 99-111, 2000; Nature Immunology 2:638-643, 2001). Requires a PhD and demonstrated expertise in biochemistry as evidenced by publication in peer-reviewed journals. You must have excellent communication, interpersonal and organizational skills.

To apply, please send your resume/C.V. indicating Job Code 01-4402/01-4404-SCI via email to dixit.vishva@gene.com and macgregor.shannon@gene.com and cc to genentechjobpost@webhirerpc.com.

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TEL AVIV UNIVERSITY

Sackler School of Medicine
Tenure-Track Positions

The Sackler School of Medicine seeks outstanding candidates to fill a number of tenure-track positions at the level of Lecturer, Senior Lecturer and Associate Professor. Candidates must possess Ph.D. or M.D. degrees and have postdoctoral experience. Successful candidates will be expected to develop an independent, vigorous research program and be involved in teaching medical and graduate students. An appropriate start-up package will be offered.

Positions are available in the following Departments (preferred fields of research indicated):

- **Physiology & Pharmacology** (physiology, biophysics, pharmacology, neurosciences)
- **Human Microbiology** (bacteriology, fungal biology)
- **Human Genetics and Molecular Medicine** (molecular genetics, bioinformatics, functional genomics, human population genetics, molecular cytogenetics, behavioral genetics, genetics of complex traits)
- **Pathology** (molecular pathology, candidates with M.D. / Ph.D. preferred)
- **Anatomy and Anthropology** (physical anthropology, human biology)

Review of applications will begin in early February 2002. Applicants should send their curriculum vitae and list of publications, and a statement of research program, to the address below, and ask at least 3 referees to send a letter of reference to the same address, till **January 31, 2002**:

The Search Committee c/o Mr. Amit Nitzan
The Sackler School of Medicine, Tel Aviv University, Ramat Aviv
Tel Aviv 69978, Israel, Email: amitn@post.tau.ac.il

AQUATIC BIOLOGY FACULTY POSITIONS
The University of Alabama

The Aquatic Ecology and Systematics Program in the Department of Biological Sciences seeks energetic faculty to advance programmatic research goals in freshwater biodiversity and ecosystem studies. These four positions are part of a program enhancement to expand research and education activities within an existing 14-member aquatic faculty.

We are interested in research-active Freshwater Scientists to complement existing strengths in ecology and systematics and to collaborate with departmental faculty and interdisciplinary research groups such as the Center for Freshwater Studies and its NSF-IGERT Ph.D. training program.

ASSOCIATE PROFESSOR, Bishop Professorship in Freshwater Biology: Candidates must have a distinguished record in stream/river/wetland research, an ecosystem perspective, broad-based interests, and experience in synthesis across disciplines.

ASSISTANT PROFESSOR, fish systematics: background in phylogenetic systematics and natural history of freshwater fishes and ability to conduct collection-based research and curate a large freshwater fish museum.

ASSISTANT PROFESSOR, vertebrate ecology: background in ecology of fish or amphibians in lotic or wetland ecosystems involving interactions and processes at higher trophic levels.

ASSISTANT PROFESSOR, conservation biology: strong Basic Scientist who can interact with both Ecologists and Systematists.

Successful applicants will be expected to develop and maintain a vigorous research program and to contribute to quality undergraduate and graduate teaching. Information about the positions and Department is available at **website: http://www.as.ua.edu/biology**. Candidates must have a Ph.D., postdoctoral experience, and credentials commensurate with the position for which application is made.

Candidates should submit curriculum vitae; application letter that includes research goals and teaching philosophy, selection of reprints, and at least three letters of reference (just names for Bishop Professorship) to: **Chair (appropriate Search Committee), Department of Biological Sciences, Box 870344, University of Alabama, Tuscaloosa, AL 35487-0344**. Application review begins on 10 January 2002 and continues until positions are filled.

The University of Alabama is an Equal Opportunity Employer.

RESEARCH (OR SENIOR) ASSOCIATE in molecular immunology. Molecular biology expertise. United States or foreign scholar. Cell/molecular studies of the decay accelerating factor (DAF), the hemolytic disorder, paroxysmal nocturnal hemoglobinuria (PNH), the glycoinositol phospholipid (GPI) anchoring pathway, and ocular immunology. Projects include (1) structure/function analyses of DAF protein (2) development of mouse models to study PNH and DAF, (3) studies of GPI anchor biology, and (4) complement regulation in the eye. Ph.D. in biochemistry or molecular biology; proficiency in cloning, gene expression, flow cytometry, and protein chemistry; and prior work in preparing transgenic/knockouts preferred. Academic laboratory, part of a large collaborative immunology group. Staff includes Postdoctoral Fellows and Ph.D. students. Contact: **Edward Medof, 2085 Adelbert Road, Cleveland, OH 44106. Telephone: 216-368-5434; FAX: 216-368-0495.** *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Gustavus Adolphus College invites applications for a tenure-track position as **ASSISTANT PROFESSOR** (or Associate with appropriate credentials) in environmental science to begin September 1, 2002.

Responsibilities will consist of teaching the Environmental Studies Program's introductory and senior seminar courses, which entail the study of environmental issues and problems from interdisciplinary perspectives including humanities and social sciences. Teaching other environmentally related courses in his/her areas of expertise, developing an ongoing program of scholarly research, and directing the program in the near future will also be expected.

We seek candidates who will have completed the Ph.D. by August 2002. The successful candidate must demonstrate a strong commitment to interdisciplinary teaching and research in a liberal arts setting. Preference may be given to applicants from a physical science; the appointment will be in the department of the successful candidate's discipline and in Environmental Studies.

To apply, send letter of application, curriculum vitae, statements of interdisciplinary teaching philosophy and research interests, and three to five letters from professional references (one of which must address teaching capabilities) to: **Dr. Don Scheese, Director, Environmental Studies Program Search, Gustavus Adolphus College, 800 West College Avenue, St. Peter, MN 56082-1498. Website: http://gustavus.edu/oncampus/facservices/Human_Resources/Employment/#academic.** Review of applications will begin on January 31, 2002, and continue until the position is filled. *Equal Opportunity Employer.*

BIOLOGY FACULTY VACANCY
August 2002

Castleton State College seeks applications for a tenure-track position in biology beginning August 2002. Applicants must have a Ph.D. in the biological sciences (ABD considered with completion by start date) and evidence of commitment to undergraduate education. Castleton offers several degrees in science including biology, environmental science, and health science. The position includes teaching human anatomy and physiology and appropriate lower- and upper-level courses in the candidate's area of interest. Castleton places a special value on the teaching role of its faculty, and candidates for this position will be evaluated principally on the basis of their potential to be outstanding teachers. We particularly invite applications from candidates interested in promoting high-quality K–12 science education in local schools including collaboration with inservice and preservice teachers. Strong interpersonal skills and the ability to work effectively with colleagues are also essential. Salary is dependent on qualifications and experience. Castleton is a small state college located in the lakes region of western Vermont. Review of applications will begin January 7, 2002, and continue until the position is filled. Send résumé, three letters of recommendation, and a statement of teaching interests (including proposed courses) to: **Dr. Joseph T. Mark, Academic Dean, Castleton State College, Castleton, VT 05735.** *Equal Opportunity Employer.*

Plant molecular biology, Middle Tennessee State University. **ASSISTANT/ASSOCIATE PROFESSOR** rank, tenure-track. Doctorate required by August 2002 start date. Postdoctoral experience a plus. Teaching excellence/research/public service expected. Responsibilities include teaching introductory biology, developing a plant biotechnology course, and collaborative research with botany and biotechnology groups. A broad background in botany and research interest in plant molecular biology with agricultural application preferred. Applicant review begins 15 January 2002. Send cover letter (reference position 103040), curriculum vitae, three reference letters, transcripts, and statements of teaching and research philosophy to: **Dr. Becky Seipelt, Committee Chair, Box 60, MTSU, Murfreesboro, TN 37132. E-mail: rseipelt@mtsu.edu; website: http://www.mtsu.edu.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

INDIANA UNIVERSITY SCHOOL OF MEDICINE

Indiana University School of Medicine, Division of Infectious Diseases, is recruiting an **ASSISTANT SCIENTIST** in the field of human papillomaviruses. This is a full-time, nontenure-track faculty position, working closely with an established Investigator in the field of HPV biology, pathogenesis, and immunology. The position includes start-up funds, modern laboratory facilities, salary, and benefits. Outstanding candidates interested in HPV pathogenesis are encouraged to apply. The appointee will be expected to maintain a vigorous research program and obtain independent funding. Successful candidates must have Ph.D. and at least three years of additional training/experience in HPV research or closely related field. For consideration, send curriculum vitae; letter of research interest; and three letters of recommendation before January 31, 2002, to: **Darron R. Brown, M.D., Professor of Medicine, Microbiology, and Immunology, Division of Infectious Diseases, Indiana University School of Medicine, 545 Barnhill Drive, EH 435, Indianapolis, IN 46202-5124.** *Indiana University is an Affirmative Action/Equal Opportunity Employer; Minorities/Females/Disabled.*

ECOSYSTEMS/AQUATIC BIOLOGIST
Carleton College

The Department of Biology invites applications for a temporary full-time position for the 2002–2003 academic year (1 September to 15 June). Teaching responsibilities will include an upper-level course in ecosystems ecology, an upper-level course in aquatic biology with laboratory, a nonmajors course in the biology of global change, and involvement in the introductory biology sequence. Ph.D. preferred; ABD considered. Send letter of application, curriculum vitae, graduate transcripts, a statement of teaching philosophy, a brief summary of research, and three letters of reference to: **Professor Stephan Zweifel, Department of Biology, Carleton College, Northfield, MN 55057-4025.** Application deadline is January 11, 2002. *Carleton College is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are strongly encouraged to apply.*

ASSISTANT PROFESSOR TROPICAL FORESTRY

The School of Forest Resources and Conservation and the Center for Latin American Studies, University of Florida, invite applications for an Assistant Professor, 12-month, tenure-track faculty position (70% research and 30% teaching). Candidates should have a Ph.D. in forestry or a related field and Latin America experience. Application deadline is January 10, 2002. Please see website: **http://www.sfrc.ufl.edu/announce.html** for details. Contact: **Dr. P. K. Nair, SFRC, University of Florida, Gainesville, FL 32611-0410 U.S.A. E-mail: pknair@ufl.edu; Telephone: 352-846-0880; FAX: 352-846-1277.** Refer to Position 911070. *The University of Florida is an Equal Opportunity/Equal Access/Affirmative Action Employer. Women and minorities are encouraged to apply.*

The Department of Biological Sciences/Women's Studies Center at Florida International University seek **ASSOCIATE- or ADVANCED ASSISTANT PROFESSOR**-level applicants for shared position starting August 2002. Ph.D., postdoctoral experience, and strong research record required. Letter, curriculum vitae, and three references to: **Dr. Suzanna Rose, Director, Women's Studies Center, DM212, FIU, Miami, FL 33199. E-mail: srose@fiu.edu; website: http://www.fiu.edu/~wstudies.** Deadline: December 31, 2001. *FIU is an Equal Opportunity/Equal Access Institution.*

ASSISTANT/ASSOCIATE PROFESSOR BIOINFORMATICS

The **Bioinformatics Program** at the **University of the Sciences in Philadelphia** invites applications for a tenure-track **Assistant/Associate Professor** position in bioinformatics starting August 12, 2002. This position is part of a new multidisciplinary Bioinformatics Program at USP, which awards both B.S. and M.S. degrees in bioinformatics.

Appointment can be in any appropriate Department within the Misher College of Arts and Sciences. This position requires a Ph.D. degree in a bioinformatics-related field with Post-doctoral experience preferred. The successful candidate will be expected to demonstrate excellence in teaching at both the undergraduate and graduate (MS) levels, and develop an active, externally fundable research program. Candidates with research interests in computer software development and database design as it relates to problems in genomics, transcriptomics, proteomics or other related disciplines are preferred.

USP is a unique, private health science University with 2,300 undergraduate and graduate students, with programs in the natural sciences, pharmacy, and other health related areas. Consult our Web site at **http://www.usip.edu/bioinformatics/** for additional information.

Applicants should submit a CV, an indication of teaching interests, a research plan, equipment needs, copies of transcripts, and contact information for three references to: **Bioinformatics Search Committee, Misher College of Arts and Sciences, University of the Sciences in Philadelphia, 600 S. 43rd St., Philadelphia, PA 19104.**

Evaluation of applications will begin **January 4, 2002** and continue until the position is filled.

USP UNIVERSITY OF THE SCIENCES IN PHILADELPHIA

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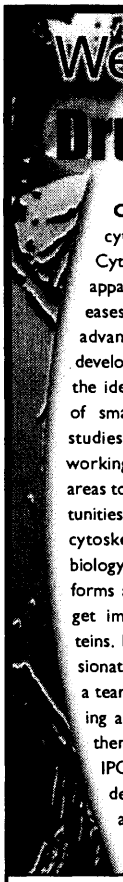
We're Writing a New Chapter in Drug Discovery & Development



Cytokinetics is focused on cytoskeletal pharmacology. Cytoskeletal involvement is apparent in many different diseases, and we're committed to advancing drug discovery & development in this area through the identification & development of small molecules for clinical studies. Our R&D teams are working in several therapeutic areas to capture the broad opportunities presented by targeting the cytoskeleton. Our proprietary biology & cellular informatics platforms allow us to selectively target important cytoskeletal proteins. If you're energetic & passionate about your work, and are a team player who enjoys thinking about cutting-edge science, then come join us. We're a Pre-IPO biotech leader that is defining a new class of therapeutic agents!

- **Scientist, Cell Biology** *(Job# CB01-03-SCI)*
- **Research Associates, Cell Biology** *(Job# CB01-01-SCI)*

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EDUCATION

Assistant Professor in Biophysics

Anticipated Tenure Track 2002-2003

Benedictine University is seeking an Assistant Professor to teach intro physics for life/health science majors; course development; interdisciplinary fac/student research in biophysics, molecular biology or molecular modeling/bioinformatics; opportunity to begin undergrad research 6/1/02, separate from contract 9/1/02.

Qualifications: Ph.D. required; research interest involving undergrad students with an interest in molecular modeling.

Please submit cover letter, c.v., statement of teaching and research interests, three recommendation letters (one of which addresses teaching effectiveness) to:

Office of Employee Services
Benedictine University
5700 College Road,
Lisle, IL 60532

Benedictine University

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Benedictine University is an Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.

Franklin W. Olin College of Engineering

Faculty Position - Physics

The **Franklin W. Olin College of Engineering** is a new institution that strives to provide the best and most innovative engineering education to the world's brightest and most enterprising students. The College is seeking exceptional faculty dedicated to exemplary undergraduate teaching and committed to innovation and intellectual vitality through one or more creative endeavors.

Faculty are expected to become inspirational teachers of undergraduates, with special emphasis on the development of innovative approaches and non-traditional educational experiences. Individual research is encouraged, with no a priori restrictions on specific areas; candidates should expect to accomplish nationally visible achievements in their field, and be able to demonstrate that such research can be connected in a meaningful way to enriching the education of engineering undergraduates. Multidisciplinary candidates that demonstrate agile thinking, innovation, or entrepreneurship are encouraged to apply.

The Franklin W. Olin College of Engineering, established recently by a major commitment from the F. W. Olin Foundation, will provide all students a full 4-year scholarship. An entirely new campus is currently under construction in Needham, MA, adjacent to Babson College. While Olin College is a completely independent institution, access to Babson's world-class programs and other colleges near Boston's Route 128 high-technology corridor will enrich the opportunities available to Olin faculty and students.

To apply, please send an application letter describing your teaching, research and other professional goals and accomplishments with a current resume to: **Physics Faculty Search, c/o Dr. David V. Kerns, Jr., Provost, Franklin W. Olin College of Engineering, MS-PT, 1735 Great Plain Ave., Needham, MA, 02492-1245. Email: facultysearch@olin.edu**

Applications and nominations will be considered until the position is filled. In order to assure consideration, applications should arrive by **December 31st.**

The Franklin W. Olin College of Engineering is an Equal Opportunity Employer.

Visit our web site: www.olin.edu

SAINT LOUIS UNIVERSITY

EVOLUTIONARY BIOLOGIST AND DEVELOPMENTAL CELL BIOLOGIST

The Department of Biology at Saint Louis University, a Catholic Jesuit institution dedicated to education, research, and health care, is seeking applicants for two tenure-track **ASSISTANT PROFESSOR** positions beginning August 2002. We seek an Integrative Evolutionary Biologist focusing on biodiversity at the micro- and/or macroevolutionary scale of plants and/or animals. A variety of research approaches will be considered ranging from genetic to organismal evolution. We also seek a Eukaryotic Cell Biologist using integrative approaches to investigate developmental mechanisms and their evolution. Successful candidates must have a Ph.D. and a record of research productivity; postdoctoral or equivalent experience preferred. The Department includes a diverse faculty with foci in two areas: ecology, evolution, and systematics and cellular and molecular regulation. Candidates must develop an independent, extramurally funded research program; participate in undergraduate and graduate teaching/mentoring; and expand departmental course and research offerings in their area of expertise. Opportunities exist to join in collaborations with two area medical schools, Danforth Plant Science Center, Missouri Botanical Garden, St. Louis Zoo, University of Missouri–St. Louis, and Washington University. Applicants should submit curriculum vitae, statements of teaching and research goals and accomplishments, reprints, and three letters of recommendation to: **Dr. Richard L. Mayden, Department of Biology, Saint Louis University, 3507 Laclede Avenue, St. Louis, MO 63103-2010. E-mail: maydenrl@slu.edu; website: http://bio.slu.edu.** Review of candidates will begin December 21, 2001.

Saint Louis University is an Affirmative Action/Equal Opportunity Employer and encourages nominations of and applications of women and minorities.

ASSISTANT PROFESSORS MOLECULAR TOXICOLOGY
University of Colorado Health Sciences Center

The Department of Pharmaceutical Sciences of the University of Colorado Health Sciences Center is inviting applications for two Assistant Professor positions in molecular toxicology. Areas of interest include pharmacogenetics and mechanisms underlying individual susceptibility to toxicity. Applicants with expertise in other areas of mechanism-based toxicology including signal transduction and regulation of gene expression or protein function are strongly encouraged to apply. The successful candidates will join a very interactive group of Researchers working in the areas of molecular toxicology, pharmaceutical biotechnology, biomolecular structure, and experimental therapeutics of anticancer agents. Successful candidates will contribute to Ph.D. training and Pharm. D. teaching and will be expected to develop an extramurally funded research program. Applicants should send curriculum vitae, a short summary of research plans, and the names and contact information of three references to: **Dr. David Ross, Department of Pharmaceutical Sciences, C238, School of Pharmacy, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. E-mail: david.ross@uchsc.edu.** Screening of applications will begin February 1, 2002, and continue until the position is filled. *The University of Colorado Health Sciences Center is committed to Equal Opportunity and Affirmative Action.*

TENURE-TRACK DIRECTOR NONMAJORS BIOLOGY PROGRAM

California State University, Fullerton, Department of Biological Science, is seeking applicants for a full-time, tenure-track position at the **ASSISTANT PROFESSOR** level to begin August 2002 to coordinate general education (GE) courses in biology. The successful applicant must have a Ph.D. in biology with an interest in teaching biology to nonmajors and in coordinating the teaching activities of part-time faculty and graduate students. Research may be in any area of biology but research in teaching undergraduate biology is preferred and should involve undergraduate and graduate students and result in publications in refereed journals. Teaching responsibilities include undergraduate courses in biology, participation in the training of teaching assistants, and development of upper-division or graduate courses in the faculty member's area of expertise. The successful candidate is expected to pursue extramural funding to support teaching and research interests. Information about the Department and campus is available through the Department's **website: http://biology.fullerton.edu**. Applicants should send a letter that explains how they meet the qualifications outlined above, curriculum vitae, a statement about teaching/curricular plans, teaching philosophy and research plans and goals, copies of two publications, and three letters of recommendation from individuals familiar with their teaching and research potential to: **Chair, GE Search Committee, Department of Biological Science, California State University Fullerton, P. O. Box 6850, Fullerton, CA 92834-6850.** Review of applicants will begin February 15, 2002, and continue until a suitable candidate is appointed. Salary is competitive and commensurate with experience and qualifications. *California State University, Fullerton, is an Affirmative Action/Equal Opportunity/Title IX/Americans With Disabilities Act Employer. Women and minority candidates are particularly encouraged to apply.*

FACULTY POSITION IN APPLIED PHYSICS
California Institute of Technology

The Applied Physics program at Caltech invites applications for a tenure-track position as **ASSISTANT PROFESSOR**. We are primarily interested in seeking highly qualified junior candidates who are committed to research and teaching in areas in which fundamental physical principles are applied to important technological and/or interdisciplinary problems. The research areas may include but are not limited to soft condensed matter, biophysics, nanofabrication/characterization, electronic, photonic, and mechanical nanoscale devices based on novel materials. For especially well-qualified candidates, a senior appointment may be considered. The initial term of appointment is normally for four years, and appointment is contingent upon completion of a Ph.D. Exceptionally well-qualified candidates may be considered at the Associate or Full Professor level. Interested candidates must file an online application by visiting **website: http://www.aph.caltech.edu/search/** and following the instructions. As part of those instructions, you will be asked to submit (by e-mail) pdf versions of your curriculum vitae, a list of your publications, a teaching and research plan, a[nd] [co]pies of two to three significant publications. T[he] deadline for receipt of all application materials is [Fe]bruary 15, 2002, but evaluation of candidates [will] begin as soon as completed applications are rece[ived]. *Caltech is an Equal Opportunity/Affirmative Action E[mp]loyer. Women, minorities, veterans, and disabled persons are [enc]ouraged to apply.*

ANIM[AL] GENOMICS SITLINGTON EN[DOW]ED PROFESSORSHIP
Departme[nt] of Animal Science
Oklahor[a] State University
Stillwate[r, O]klahoma 74078

For complete position announcement or information: **Telephone: 405-744-6070; FAX: 405-744-7390; e-mail: David Buchanan (buck353@okstate.edu); website: http//www.ansi.okstate.edu/positions.**

SWARTHMORE

The Biology Department at Swarthmore College invites applications for a one-year faculty leave replacement position at the **ASSISTANT PROFESSOR** level beginning September 2002. Teaching will include undergraduate cell biology and genetics courses with laboratories. Applicants should have a Ph.D., teaching experience, and a strong commitment to undergraduate education. Interested persons should submit curriculum vitae, three letters of recommendation, and a statement of teaching and research interests to: **Cell Biology and Genetics Search, Department of Biology, Swarthmore College, Swarthmore, PA 19081**. All application materials should be received by January 7, 2002. *Swarthmore College is an Equal Opportunity Employer.*

FACULTY POSITION IN MICROBIOLOGY
The Massachusetts College of Pharmacy and Health Sciences

The Massachusetts College of Pharmacy and Health Sciences, School of Arts and Sciences, announces a full-time faculty position for a Microbiologist at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level beginning fall 2002. The successful applicant will have a Ph.D., a commitment to teaching excellence, and a program of research or scholarship. Primary teaching responsibilities will include medical microbiology, service as Coordinator of the Medical Microbiology Laboratories, teaching of either anatomy and physiology or public health courses, and development of elective courses in the candidate's area of specialization. Ability to participate in the advising of premedical students and to assist in the development of externship or service-learning opportunities in conjunction with the B.S. in premedical and health studies degree program is also essential. MCPHS (**website: http://www.mcp.edu**) is located in the heart of Boston's Longwood Medical area and is a member of the Colleges of the Fenway consortium. Interested candidates should send curriculum vitae, a statement of teaching and research interests, and three letters of recommendation to: **Dr. Robert V. Zackroff, Chair, Microbiologist Search Committee, Massachusetts College of Pharmacy and Health Sciences, 179 Longwood Avenue, Boston, MA 02115**. All application materials received no later than January 15, 2002, will be given full consideration.

JUNIOR OR SENIOR FACULTY POSITION INSTRUCTURAL BIOLOGY
School of Medicine
Department of Cellular and Molecular Physiology
Yale University

Applicants are solicited for a faculty position at the junior or senior level in the Department of Cellular and Molecular Physiology, Yale University School of Medicine. Candidates must hold a Ph.D., M.D., or equivalent degree. The candidate's research interest should be in the general area of cellular and molecular physiology with particular emphasis in the structural biology of ion channels, iontransporters, or related membrane proteins. Excellent opportunities are available for collaborative research as well as for graduate and medical and student teaching.

Qualified women and minority group members are encouraged to apply. Complete curriculum vitae, a statement of research interests and goals, and three letters of reference should be sent by February 1, 2002:

Dr. Steven C. Hebert, Chair
Department of Cellular and Molecular Physiology
Yale University School of Medicine
333 Cedar Street
P.O. Box 3333
New Haven, CT 06510

Yale University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/ASSOCIATE PROFESSOR/ BIOTECHNOLOGY

The DEPARTMENT OF BIO-LOGICAL SCIENCES at the UNIVERSITY OF THE SCIENCES IN PHILADELPHIA (USP) invites applications for a tenure-track, **ASSISTANT PROFESSOR** starting August 12, 2002.

Outstanding candidates may be considered for the **ASSOCIATE PROFESSOR** level. Candidates with teaching and research interests that will augment current efforts in **molecular biology, proteomics, biotechnology, or molecular microbiology** are encouraged to apply. The successful candidate will be expected to demonstrate excellence in teaching at both the undergraduate and graduate (MS) levels, and develop an active, externally fundable research program. Ability to interact in a new Bioinformatics program will be a plus. Candidates will have a Ph.D. (or comparable degree), and postdoctoral experience is preferred.

USP is a unique, private health science University with 2,300 undergraduate and graduate students, with programs in the natural sciences, pharmacy, and other health related areas. The Department offers undergraduate programs in Biology, Microbiology and Environmental Science with ~120 majors, as well as a graduate program at the MS level in Cell Biology & Biotechnology with ~30 students.

Applicants should submit a CV, an indication of teaching interests, a research plan, equipment needs, copies of transcripts, and contact information for three references to: **Biology Search Committee, Department of Biological Sciences, University of the Sciences in Philadelphia, 600 S. 43rd St., Philadelphia, PA 19104**. Evaluation of applications will begin **January 4, 2002** and continue until the position is filled. Consult our Web site at **http://www.usip.edu/biology/** for additional information.

USP UNIVERSITY OF THE SCIENCES IN PHILADELPHIA

An Equal Opportunity/Affirmative Action Employer

Health Scientist Administrators
National Institute of General Medical Sciences
National Institutes of Health

NIGMS

The Cell Biology and Biophysics Division of The National Institute of General Medical Sciences, an Institute of the National Institutes of Health, is seeking two individuals to serve as Program Directors. These individuals will be responsible for stimulating, planning, advising, directing and evaluating program activities for portfolios of research grants within the Division.

One vacancy is in the Biophysics Branch in the area of **Molecular Biophysics**. The person selected will provide leadership in the administration of research grants, which are at the cutting edge of the application of modern biophysical methods to cell and molecular biology. The ideal candidate will have experience in biophysics as well as cell and/or molecular biology. The contact person for this position is: Dr. Catherine Lewis (301) 594-0828 lewisc@nigms.nih.gov

The second vacancy is in the newly formed Structural Genomics and Proteomics Technology Branch and is in the specific area of **Structural Genomics**. The applicant must have knowledge and experience in this area. The ideal candidate will have expertise in high resolution structure determination of proteins as well as genomic and computational approaches. The contact person for this position is: Dr. John Norvell (301) 594-0533 norvellj@nigms.nih.gov

Minimal qualifications include a Ph.D. or equivalent degree in a field relevant to the position.

Applications must be received or postmarked by December 20, 2001. To apply, submit a current curriculum vitae, including a list of publications, and the names of three references to the address given below. Clearly indicate for which position you are applying, and send to:

Ms. Melvin
NIGMS Personnel Office
45 Center Drive, Suite 3As.13, MSC 6200
Bethesda, MD 20892-6200
Phone (301) 594-2749; Fax (301) 480-0850; TDD (301) 402-6327
Email: NIGMSAPPS@NIGMS.NIH.GOV
www.nigms.nih.gov

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UNIVERSITY of NEW HAMPSHIRE

Biomedical Scientist
Assistant Professor
Tenure-Track Position

The Department of Animal Nutritional, and Medical Laboratory Sciences in the College of Life Sciences and Agriculture at the University of New Hampshire (UNH) invites applications for an academic year, tenure-track position in the area of Biomedical Sciences starting Fall Semester 2002.

Responsibilities: The successful candidate will be expected to teach in the Medical Laboratory Science Program at the undergraduate and graduate level, to include courses in clinical chemistry and in the area of the candidate's research interest. The candidate should have research expertise that utilizes contemporary approaches to develop a program of research complementing existing depart-mental strengths. Focus on ongoing research includes: adipocyte physiology, cancer biology, vascular or reproductive physiology, and nutritional biochemistry.

Qualifications: A doctoral degree in an appropriate discipline and postdoctoral experience are required. The successful candidate must have a strong commitment to excellence in teaching, and is expected to establish an independent research program that actively involves graduate (Ph.D. and M.S.) and undergraduate students.

Candidates should send a current curriculum vita, a statement of teaching experience and philosophy, a description of research interests (including accomplishments and future directions), and names, addresses, phone and email contact information for at least three references to:

Biomedical Science Search Committee Chair, Dept. of Animal, Nutritional and Medical Laboratory Sciences, Kendall Hall, UNH, Durham, NH 03824, FAX: 603-862-3758.

Review of applications will begin imme-diately and continue until the position is filled.

UNH is committed to excellence through diversity among its faculty and staff and strongly encourages women and minorities to apply.

Harvard Medical School
Department of Biological Chemistry and Molecular Pharmacology

The Department of Biological Chemistry and Molecular Pharmacology (BCMP) is one of six basic science departments at Harvard Medical School. The department provides a dynamic and rigorous research setting for faculty members who use molecular, cellular, structural and computational biology to investigate diverse problems in modern biology.

The Department intends to recruit three new faculty members during the next two years. One appointment will be in the area of computational biology and bioinformatics, another in structural biology using NMR, and a third in any area of modern molecular biological research. Applicants should be interested in establishing a vibrant research laboratory. Departmental faculty have access to graduate students in Harvard Medical School's Biological and Biomedical Sciences program, in the university's Biophysics Program and in the Harvard-MIT Division of Health Sciences and Technology Program. For information about current faculty and research, please refer to our website: http://sbweb.med.harvard.edu/~bcmp/

Assistant or Associate Professor

BIOINFORMATICS AND COMPUTATIONAL BIOLOGY
Computational biology research, including, but not limited to chemical biology, biological network modeling, genetic epidemiology and/or computational functional genomics.

STRUCTURAL BIOLOGY/NMR FOCUS
NMR spectroscopy of biological macromolecules and related fields.

BIOLOGIST
Any aspect of biological research that relates to contemporary biochemistry, cell biology, molecular biology, developmental biology and/or pharmacology.

Applicants for all positions should submit a curriculum vitae, bibliography, a two-page description of research interests, and arrange to have four letters of recommendation sent to: **Search Committee Chair, BCMP, Harvard Medical School, 240 Longwood Avenue, C-213, Boston, MA 02115.**

The University of North Carolina at Charlotte (UNC Charlotte) is seeking applications for two tenure-track positions to begin fall of 2002. The first position is at the **ASSISTANT** to **ASSOCIATE PROFESSOR** level in the general area of cell biology while the second is for an **ASSSISTANT** or **ASSOCIATE PROFESSOR** in the area of environmental biology. UNC Charlotte is a rapidly expanding university committed to research and teaching excellence. Participation and collaboration with faculty in an interdisciplinary Ph.D. program in biology (biomedicine and biotechnology) will be required for both positions as well as participation in graduate (M.S.) and undergraduate (B.S., B.A.) programs. Successful applicants are expected to have a Ph.D. with significant postdoctoral experience and to develop and maintain an extramurally funded research program. For both positions, special attention will be paid to those applicants whose research focus complements that of existing faculty and possesses significant potential for multiple collaborations within the Department. For the cell biology position, any area of eukaryotic cell biology will be given consideration, although applicants whose research focuses on basic cellular mechanisms in mammalian target organs such as the liver, reproductive tissues, the immune system, and the central nervous system are particularly encouraged to apply. For the environmental biology position, attention will be given to applicants who study any aspect of environmental health, particularly the effects of toxins or other environmental stressors on molecular- and population-level genetic mechanisms. The applicant should have substantial laboratory and field components to his/her research and will be expected to teach an undergraduate ecology course plus upper-division specialty courses. For further information about these positions, the University, the Department of Biology, the interdisciplinary Ph.D. program, and the research areas of participating faculty, see our **website: http://www.bioweb.uncc.edu**. Applicants should submit a complete résumé, a description of research interests, and names of at least three references to: **Chair of the Search Committee, Department of Biology, The University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, NC 28223-0001**. Please indicate which position you are applying for. Consideration of applications will begin December 15, 2001, and continue until the positions are filled. *UNC Charlotte is an Affirmative Action/Equal Opportunity Employer.*

YALE UNIVERSITY
SCHOOL OF MEDICINE
Department of Genetics
Center for Human Genetics

The Department of Genetics and the newly established Yale Center for Human Genetics are seeking outstanding candidates to fill a tenure-track position at the **ASSISTANT PROFESSOR** level. The successful applicant will be provided generous start-up funds and will establish a strong, independent research program in mammalian genetics or a related area. Applicants using the mouse as a model system are particularly encouraged to apply. We strongly encourage applications from women and minority candidates. Curriculum vitae, a brief statement of reserch plans, and three letters of recommendation should be sent to:

Richard P. Lifton, M.D., Ph.D.
Chairman, Department of Genetics
Yale University School of Medicine
P.O. Box 208005
New Haven, CT 06520-8005

An Equal Opportunity/Affirmative Action Employer.

LECTURER. Rapidly growing noncommercial biomedical firm needs **SCIENTISTS/PHYSICIANS** to give lectures to professionals. Lecture topics include infectious diseases, learning disabilities, and brain neuroscience. Must have excellent communication skills. Some travel required. Excellent compensation. Please contact: **Dr. R. Colman, Biomed, 2352 Stanwell Drive, Concord, CA 94520. FAX: 925-363-7798; e-mail: info@biomedgeneral.com**.

POSITIONS OPEN

FACULTY POSITION
Molecular Imaging and Contrast Agents
The University of Arizona

The University of Arizona is seeking applications for a tenure-track faculty position. The primary appointment could be held in either the Department of Chemistry or the Department of Biochemistry and Molecular Biophysics. A joint appointment within The College of Science or College of Engineering and Mines is also possible.

The successful candidate will be expected to have a strong background in chemistry or biochemistry and interests in developing a program in molecular imaging and contrast agents. We expect to fill this position at the **ASSISTANT PROFESSOR** level but qualified applicants at other levels are invited to apply. Ph.D. in chemistry or biochemistry is required. Candidates with a strong motivation toward development of a vigorous and productive research program and a commitment to excellence in teaching chemistry or biochemistry and interdisciplinary courses at the undergraduate and graduate levels are preferred. This position will also be responsible for supervising B.S., M.S., Ph.D. students, and Postdoctoral Researchers.

To apply, please submit a letter of application, curriculum vitae including list of publications, and a short research plan as well as arranging for three letters of recommendation to be sent to: **Dr. Jennifer Barton, Department of Biomedical Engineering, Imaging Faculty Search Committee, The University of Arizona, 1230 East Speedway Boulevard, Tucson, AZ 85721-0104**. Please reference Job Number 20935. Review of application materials will begin January 15, 2002, and will continue until position is filled. *The University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer; Minorities/Women/Disabled/Veterans. Proof of authorization to work in the U.S.A. is required.*

Brooklyn College/CUNY invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level in the Department of Biology beginning September 2002. We seek a broadly trained Animal (nonmammalian) or Plant Physiologist. The faculty member will teach an introductory course in comparative physiology for biology majors and an elective course in his/her specialty. Development of a strong, competitive, research program that trains undergraduate and graduate research students and generates external grant funding is essential. Applicants must have a Ph.D. degree, postdoctoral training, publications, and a strong commitment to undergraduate education. A complete application consists of curriculum vitae, statement of research plans, and three letters of recommendation (to be sent directly from three references). Review of résumés will continue until the position is filled. Apply to: **Assistant Vice President of Human Resource Services, Brooklyn College, 2900 Bedford Avenue, Brooklyn, NY 11210**. *An Affirmative Action/Equal Employment Opportunity/Immigration Reform and Contract Act/Americans With Disabilities Act Employer.*

The University of North Alabama is accepting applications for a nontenure-track appointment at the rank of **INSTRUCTOR** or **ASSISTANT PROFESSOR** in the Department of Biology beginning on August 19, 2002. A minimum of a Master's degree and 18 graduate hours in biology are required. Salary will be based on qualifications and experience. Primary duties will consist of teaching nine semester hours of introductory biology and coordination of freshman biology laboratories. Submit a letter of application accompanied by a detailed résumé (including transcripts) and the names, addresses, and telephone numbers of three references to: **Director of Human Resources and Affirmative Action, University of North Alabama, UNA Box 5043, Florence, AL 35632-0001**. Review of applications will begin November 26, 2001. Applications will be accepted until the position is filled. *UNA is an Equal Opportunity Employer committed to achieving excellence and strength through diversity. UNA seeks a wide range of applicants for this position so that one of our core values, ethnic and cultural diversity, will be affirmed.*

POSITIONS OPEN

PLANT/ENVIRONMENTAL SCIENCE

The Department of Biology at Rhodes College seeks qualified applicants for an initial three-year **ASSISTANT PROFESSOR** position to begin in August of 2002. Candidates must have a Ph.D., a strong interest in teaching at the undergraduate level, and the ability to maintain an active research program in which undergraduate students can participate. Teaching responsibilities will include a field-based plant course, evolution, and participation in the introductory biology sequence. The successful candidate will also have an opportunity to participate in the development of an interdisciplinary environmental program and offer courses on current environmental issues. The applicants' area of research should demonstrate a familiarity with environmental policy with preference given to persons whose research involves plant systems.

Rhodes College is a highly selective, nationally ranked undergraduate college of the liberal arts and sciences whose location in metropolitan Memphis, Tennessee, provides the cultural and social amenities of a city of one million residents. The College is historically affiliated with the Presbyterian Church in the United States.

Applicants should submit a letter of application; curriculum vitae; transcripts of graduate coursework; representative reprints; statements of teaching philosophy and research goals; and three letters of recommendation by January 31, 2002, to:

Dr. David Kesler, Chair of the Search Committee
Department of Biology
Rhodes College
Memphis, TN 38112

Rhodes welcomes applications for all of its faculty positions from all persons and does not discriminate on the basis of gender, race, color, age, religion, disability, or national and ethnic origin.

RESEARCH POSITIONS
Basic and Clinical Sciences

The Department of Surgery at the Beth Israel Deaconess Medical Center invites applications for Research (Postdoctoral) Fellows and junior faculty positions to participate in basic, translational, and clinical research in the following areas: vascular and cardiovascular biology, transplantation biology and immunobiology, epithelial biology and oncology, neurosurgery and neurooncology, nutrition, and urology. Applicants must have a Ph.D. and/or M.D. degree and significant research training and experience. Successful candidates will have an academic appointment at Harvard Medical School.

Beth Israel Deaconess Medical Center is a leading, internationally recognized academic medical center affiliated with Harvard Medical School and ranks third in the United States among independent research hospitals in sponsored research funding. Please send letters of application accompanied by curriculum vitae and names of three references to: **Susan J. Hagen, Ph.D., Interim Chief, Division of Surgery Research, Beth Israel Deaconess Medical Center, Dana 805, 330 Brookline Avenue, Boston, MA 02215**. *Beth Israel Deaconess Medical Center is an Equal Opportunity Employer that values the strength diversity brings to the workplace.*

SENIOR POSTDOCTORAL FELLOW
Department of Neurology
Oregon Health and Science University

Immediate position available for Senior Postdoctoral Fellow to join the neuroimmunology research group. Cellular and molecular biology required with experience in EAE preferred. Research will focus on gender differences in EAE. Curriculum vitae to: **Halina Offner, Doctor of Medicine, Professor, Neuroimmunology Research R&D-31, Portland VA Medical Center, 3710 S.W. U.S. Veterans Hospital Road, Portland, OR 97201**. *Oregon Health and Science University is an Equal Opportunity/Affirmative Action Employer.*

Plant Genomics/Molecular Biology
Cornell University – Geneva Campus

Assistant/Associate Professor
(12-month, tenure track, 100% research appointment)

Responsibilities: To develop an innovative program in genomics to examine the genetic and physiological basis of plant development and/or responses to their environment. Use of appropriate state-of-the-art structural and functional genomic, molecular and biochemical tools is expected. The appointee is expected to develop a program to examine plant developmental and/or senescence processes, and/or plant responses to biotic or abiotic stresses. The appointee should conduct research relevant to fruit and/or vegetable crops important to New York including application of biotechnology and/or improvements in understanding of the genetics or physiology of these crops (see http: www.nysaes.cornell.edu/). However, the use of model systems is also encouraged. Collaboration and/or interaction with a broad range of faculty is expected, as well as a willingness to serve as a major or minor advisor to Cornell University graduate students. Extramural funding for research will be required. A generous startup package, technical support and excellent laboratory facilities are available.

Qualifications: A Ph.D. plus at least one year postdoctoral experience emphasizing research in genomics, molecular biology or similar disciplines is required as is a solid grounding in plant biology, plant pathology, horticulture or a related field. Demonstrated proficiency in publication of scholarly research in good quality journals and experience in obtaining extramural funding is required.

Starting Date: July 1, 2002. **Salary:** Competitive and commensurate with experience and qualifications. Attractive fringe benefits are available. **Deadline for applications:** January 18, 2002 or until the position is filled.

Application: Send resume, statement of research interests, copies of recent publications, transcripts and names and addresses, including e-mail and FAX, of three references to:

CORNELL

Dr. Gary E. Harman, Chair, Search Committee
Department of Horticultural Sciences
Cornell University – Geneva Campus
Geneva, NY 14456

Cornell University is an Affirmative Action/ Equal Opportunity Employer and Educator

http://www.cornell.edu
http://chronicle.com/jobs/profiles/2377.htm

GLOBAL OPPORTUNITIES

TEL AVIV UNIVERSITY

Sackler School of Medicine
Tenure-Track Positions

The Sackler School of Medicine seeks outstanding candidates to fill a number of tenure-track academic positions at the levels of lecturer, senior lecturer and associate professor. Candidates must hold a Ph.D. or M.D. degree and have postdoctoral experience. Successful candidates will be expected to develop an independent, vigorous research program and be involved in teaching medical and graduate students. An appropriate start-up package will be offered.

Research will be conducted at the Felsenstein Medical Research Center, which is part of the Sackler Faculty of Medicine. The Center is situated in the large clinical complex at the Rabin Medical Center encompassing Beilinson General Hospital, Schneider Children's Medical Center and the Geha Psychiatric Hospital in Petah Tikva. This location offers unique opportunities for conducting basic research with direct clinical applications. Preferred area of research is Aging in the fields of: cell biology, neuroscience, biological psychiatry, drug research, molecular genetics, functional genomics, transplantation, immunology, endocrinology & metabolism, hematology-oncology and cardiovascular research. Applicants should send their curriculum vitae, list of publications and a statement of research program to the address below and ask at least 3 referees to send letters of reference to the same address:

The Search Committee c/o Mr. Amit Nitzan
Sackler School of Medicine, Tel Aviv University, Ramat Aviv
Tel Aviv 69978, ISRAEL, Email: amitn@tauex.tau.ac.il.

Applications and letters should reach the Search Committee no later than January 15, 2002.

TENURE-TRACK FACULTY POSITIONS

The Department of Molecular Microbiology and Immunology (MMI) at the University of Missouri School of Medicine (Columbia, MO) invites applications for two tenure-track positions at the Assistant Professor level:

(1) **MICROBIAL PATHOGENESIS**, modern molecular approaches in the pathogenesis of bacterial or fungal infections;
(2) **MICROBIAL IMMUNITY**, modern molecular approaches in microbial immunity/immune response to microbes.

Applicants must possess a Ph.D., M.D., or equivalent degree, and have appropriate post-doctoral training. Successful candidates will be expected to establish outstanding, independent research programs that will attract continued extramural funding, and to participate in the teaching and training missions of the Department. The Department, currently in a significant growth phase, with a substantial University commitment of resources, is an integral part of state and federally supported programs in Molecular Biology (MBP), Microbial Pathogenesis and Immunity (PMPI), and Prevention of Animal Infectious Diseases (PPAID). MMI provides a highly interactive, rich, and supportive scientific environment. Facilities include modern research laboratories and state-of-the-art core facilities for nucleic acid sequencing, flow cytometry, confocal, fluorescence and electron microscopy, mouse transgenics, ES cell manipulations, hybridoma production, comprehensive protein analysis and production, and microarray analysis. Salary and start-up packages are highly competitive. More information is available on the department (www.missouri.edu/~mmiwww) and the core support (www.biotech.missouri.edu).

Interested candidates should submit a curriculum vitae, a statement of research interests and future research goals, and the names, postal and email addresses, and phone numbers of at least three referees to the address below. Applications will be reviewed starting December 15, 2001 and considered until the positions are filled. *Submit application to:*

Microbial Pathogenesis Search Committee
or
Microbial Immunity Search Committee
Attn: Ms. Shelly Crawford, Office Supervisor
University of Missouri-Columbia, Dept of Molecular Microbiology & Immunology, M616 Medical Sciences Bldg, Columbia, MO 65212
(573) 882-8989 Email: crawfords@missouri.edu

The University of Missouri is an Affirmative Action, Equal Opportunity Employer. Women and members of minorities traditionally under-represented in biomedical research are encouraged to apply. To request ADA accommodations, please contact our ADA Coordinator at (573) 884-7278, or email tty@missouri.edu.

POSITIONS OPEN

FACULTY POSITION
Computational Biology
University of Vermont

After a successful search for two faculty members in 2001, the Department of Computer Science at the University of Vermont invites applications for two additional **TENURE-TRACK FACULTY** commencing with the 2002–2003 academic year. One of these positions is in computational biology. The University of Vermont, one of the top public national universities **(website: http://www.usnews.com/usnews/edu/college/rankings/natudoc/natudoc_pubs.htm)**, is located in Burlington, Vermont. It offers a supportive research environment in a relatively small city that repeatedly has drawn national attention for offering a high quality of life. The greater Burlington area includes 125,000 people and is situated on the shores of Lake Champlain between the Green Mountains of Vermont and the Adirondack Mountains of New York. Burlington and the surrounding area provide an environment rich in cultural, family, and sporting activities. The Department of Computer Science offers programs in the College of Engineering and Mathematics and the College of Arts and Sciences as well as a joint program with the School of Business Administration.

A new concentration in computational biology has been established in the Colleges of Medicine, Agricultural and Life Sciences, Engineering and Mathematics, and Arts and Sciences. Candidates with research interests or experience in computational biology or bioinformatics are invited to apply. Through a major Department of Energy grant that commenced in July 2000, the start-up package includes summer support, seed research grant, and reduced teaching obligations. Candidates should have a strong research record, hold a Doctorate in computer science or a closely related field, and have broad teaching abilities and interests. Please send a letter of interest, curriculum vitae, a statement of teaching experience and interests, a statement of research interests and aspirations, and arrange for at least three letters of reference to be sent to:

Chair, Faculty Search
Computational Biology Position
Department of Computer Science
University of Vermont
Burlington, VT 05405

Complete applications received by January 21, 2002, will be fully considered. For more information about the Department and the University, please see **website: http://www.cs.uvm.edu** or **e-mail: cssearch@cs.uvm.edu**. *The University of Vermont is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and members of minority groups.*

FACULTY POSITION
Virology

Miami University invites applications for a tenure-track **ASSISTANT PROFESSOR** position in microbiology with an emphasis in virology to begin in August 2002. Applicants must have a Doctorate in microbiology or closely related field and postdoctoral research experience. Applicants with research interests covering a broad range of virology will be considered; special emphasis will be placed on applicants with research programs integrating virology with genomics/proteomics or microbial ecology. Responsibilities will include maintaining an externally funded, research-active laboratory; directing M.S. and Ph.D. students; and teaching undergraduate and graduate courses including virology and courses within the discipline. More information about the Department of Microbiology and Miami University is available at **website: http://www.muohio.edu/~mbicwis/**. Screening will start on January 2, 2002, and continue until the position is filled. Applicants should submit curriculum vitae, up to three reprints, statement of research goals, statement of teaching philosophy, and have three letters of reference sent to: **Dr. Joseph M. Carlin, Department of Microbiology, Miami University, Oxford, OH 45056. E-mail: carlinjm@muohio.edu**. *Miami University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

EVOLUTIONARY MOLECULAR GENETICIST
University of Wisconsin–Milwaukee

The Department of Biological Sciences at the University of Wisconsin–Milwaukee invites applications for a tenure-track position in the area of evolutionary molecular genetics with a focus in eukaryotic systems. The candidate is expected to develop a research program in areas such as evolution of genes and genomes, gene regulation, or comparative molecular genetics by utilizing molecular genetic approaches to gain insight into how genetic change underlies evolutionary innovation. The successful candidate will complement existing strengths in the Department and will contribute to departmental teaching of graduate (M.S. and Ph.D.) and undergraduate students. Applicants must have a Ph.D. degree and postdoctoral experience and should submit curriculum vitae, a concise statement of research and teaching goals, up to three reprints, and arrange for three letters of recommendation to be sent to: **Chair, Evolutionary Molecular Genetics Search Committee, Department of Biological Sciences, P.O. Box 413, University of Wisconsin–Milwaukee, Milwaukee, WI 53201.**

Applications received by January 31, 2002, will receive full consideration. Additional information about the Department can be found at **website: http://www.uwm.edu/Dept/Biology**. *The University of Wisconsin–Milwaukee is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR
Microbiology

The Department of Biological Sciences at Auburn University invites applications for a nine-month, tenure-track position at the Assistant Professor level. The successful candidate will be responsible for teaching one or more of the following courses: general microbiology, microbial physiology, applied and environmental microbiology, or microbial genetics. Candidates with research interests in microbiology using molecular techniques are preferred. A Ph.D. degree and postdoctoral experience are required, and a demonstrated ability to establish a strong, independent, and extramurally funded research program is expected. Evaluation of applications will begin December 15, 2001, and continue until the position is filled. The expected start date is March 16, 2002. Curriculum vitae, brief statements of research interests and teaching experience, and three letters of reference should be sent to: **Professor James Barbaree, Chair, Search Committee, Department of Biological Sciences, 101 Life Sciences Building, Auburn University, Auburn, AL 36849-5407**. *Auburn University is an Equal Opportunity/Affirmative Action Employer and actively seeks applications from qualified women and minority candidates.*

NEUROBIOLOGY RESEARCH ASSOCIATE (two positions). Ph.D. in neurobiology or related field required. Postdoctoral experience preferred. Salary: $2,736 per month funded by NIH research grants to **Joe L. Martinez, Jr.** Both are focused toward understanding the neurobiology of learning and memory; one focuses on opioids, one on integrins. Methods employed include behavior, field and clamp patch recording in hippocampus, and gene regulation studied through DNA microchip array technology. One position seeks someone with experience in grant and manuscript writing and laboratory administration; one seeks an Electrophysiologist. Send employment application, curriculum vitae, three publications, and names of references to: **Office of Human Resources, The University of Texas at San Antonio, 6900 North Loop 1604 West, San Antonio, TX 78249. Telephone: 210-458-4250; website: http://www.utsa.edu**. Closing date: December 28, 2001. *UTSA is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

MARINE BOTANIST
Moss Landing Marine Laboratories

Moss Landing Marine Laboratories (MLML) and San Jose State University (SJSU) announce a tenure-track position in marine botany at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. We are seeking a field-oriented Scientist with broad interests in marine botany with emphasis on the ecology of marine macroalgae and expertise in subtidal ecology and sampling and experimental design. The successful applicant must have a strong commitment to quality instruction and pursue a vigorous research program involving M.S. students. A Ph.D. is required. Instructional duties will include marine botany, marine ecology (team taught), subtidal ecology (SCUBA certification required), and other courses in the applicant's area of expertise. Applications must be received by December 17, 2001. The position appointment is effective August 22, 2002. Applications consisting of a letter discussing teaching and research interests and professional goals and accomplishments, curriculum vitae, and the names of three references should be sent to:

Director
Moss Landing Marine Laboratories
8272 Moss Landing Road
Moss Landing, CA 95039

For further information, visit MLML's **website: http://www.mlml.calstate.edu**. MLML, located in a new laboratory on Monterey Bay in California, is operated by a consortium of California State University campuses (Fresno, Hayward, Monterey Bay, Sacramento, San Francisco, San Jose, and Stanislaus). MLML offers undergraduate courses but is primarily a graduate institution for consortia students seeking a Master of Science degree. *MLML/SJSU is an Equal Opportunity/Affirmative Action/Title IX Employer.*

ASSISTANT PROFESSOR POSITION

The Harvard-Forsyth Department of Oral Biology, Harvard School of Dental Medicine, invites applicants for a position at the level of Assistant Professor. Candidates must have a Ph.D. or equivalent degree, a strong postdoctoral training experience, a solid publication record, and demonstrated ability to attract external funding.

We seek an innovative Scientist who studies the molecular genetics of connective tissues and craniofacial bone development. In addition to establishing a successful research program, the Assistant Professor should be committed to teaching and mentoring students, Fellows, and junior faculty and strengthening the collaborative efforts of Harvard-Forsyth Department of Oral Biology faculty.

Applicants should submit complete curriculum vitae; a description of research interests and goals; and the names of three references by January 15, 2002, to: **Dr. Bjorn R. Olsen, Chair of the Search Committee, Harvard-Forsyth Department of Oral Biology, The Forsyth Institute, 140 The Fenway, Boston, MA 02115. FAX: 617-437-9822; e-mail: bolsen@forsyth.org**. The starting date for this position is September 1, 2002. For additional information, you may **Telephone: 617-262-5200, Extension 303**.

The Harvard School of Dental Medicine/Harvard University is an Equal Opportunity Employer that encourages applications from minority group members and women.

POSTDOCTORAL POSITION

Available immediately for Ph.D. or M.D. in immunology. Research will include studies on cellular and molecular mechanisms of human B cell differentiation and lymphomagenesis (reference *J. Immunol.* **157:** 1006, 1996; *J. Exp. Med.* **191:**1077, 2000). Send curriculum vitae to:

Dr. Y. S. Choi
Laboratory of Cellular Immunology
Alton Ochsner Medical Foundation
1516 Jefferson Highway
New Orleans, LA 70121

An Equal Opportunity Employer.

DARTMOUTH COLLEGE

Institute for Security Technology Studies (ISTS)

The ISTS serves as a principal national center for counter-terrorism technology and cyber-security research, development and analysis. ISTS' program is described on its Web Site listed below.

Associate Director, Operations

Responsible for leadership of all ISTS administrative and business affairs. Oversees the budgetary development of new and renewal grants and contracts. Responsible for long-range facility, personnel and other resources support. Directs and implements multi-year strategic planning process. Reports to Director, ISTS.

Associate Director, Public & Governmental Affairs

Manages ISTS relations with government agencies and other external audiences including Congress, private industry, general public, and media. Oversees the dissemination of information to government agencies, the development of private sector partnerships, and manages media relations. Reports to Director, ISTS.

Associate Director, Research and Development

Leads all aspects of the ISTS research and development programs including the process of developing the ISTS research agenda. Designs and manages the process for generating and approving research proposals for ISTS funding. Facilitates and encourages technology transfer, licensing, and commercialization. Works closely with faculty and other researchers at Dartmouth and across the U.S. Reports to Director, ISTS.

Associate Director, Institute for Information Infrastructure Protection

Responsible for developing and managing a research consortium of academic and non-profit research centers called the "Institute for Information Infrastructure Protection (I3P)," for which ISTS is the Executive Agent. The initial mission of the I3P is to formulate a national R&D agenda for cyber security and information infrastructure protection, and to increase the sharing of R&D information and foster collaborative research among consortium members. Additional information on I3P plan is in Director's testimony at http://www.ists.dartmouth.edu/ISTS/counterterrorism/preparedness.htm. Reports to Director, ISTS.

Additional information on each position and the ISTS is available at the following sites: **http://www.dartmouth.edu/admin** and **http://www.ists.dartmouth.edu.**

Submit resume and cover letter to **Richard A. Scribner, Associate Director and Search Coordinator, Institute for Security Technology Studies, Dartmouth College HB 6226, 45 Lyme Road, Suite 200, Hanover, NH 03755.** Advance materials may be submitted to **jobs@ists.dartmouth.edu, but applications will not be considered complete until a cover letter and resume are received by mail.** The letter must address how a candidate's experience meets specific position description qualifications delineated in the Dartmouth web sites listings. Separate applications are required for viable candidacy in more than one position. Applications will be reviewed until interviews commence at which time a search will be closed.

Dartmouth College is an Affirmative Action/Equal Opportunity employer. Women and minorities are strongly encouraged to apply.

Graduate School of GENOME SCIENCE & TECHNOLOGY

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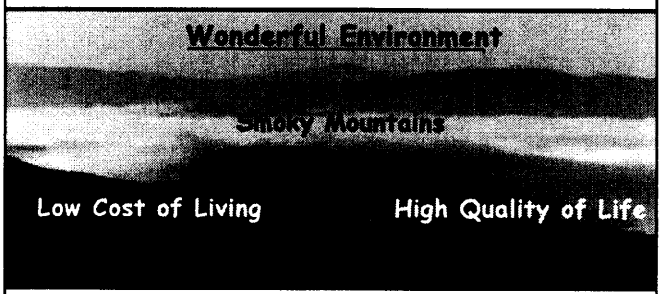
  - X-ray Crystallography
  - NMR
  - Microarrays



To apply visit the website:
http://www.lsd.ornl.gov/gst/
Or Write: Dr. Jeffrey Becker, Director
Graduate School of Genome Science & Technology
1060 Commerce Park
Oak Ridge, TN 378308026
(jbecker@utk.edu)

POSITIONS OPEN

ASSISTANT PROFESSOR POSITIONS
Immunology and Virology

The Department of Microbiology at the University of Tennessee seeks applicants for two tenure-track faculty positions, one in immunology and one in virology, both at the Assistant Professor level, to begin August 1, 2002. A Ph.D. and postdoctoral experience in immunology or virology as well as a commitment to excellence in research and teaching are required for both positions. We are particularly interested in applicants working within a biomedical framework but we encourage applications from all qualified individuals in these disciplines. In addition to developing a strong research program, successful applicants will be expected to contribute to both graduate and undergraduate teaching in the area of their expertise. Applicants should submit curriculum vitae, a statement of research and teaching interests, and provide three letters of reference to: **Beth C. Mullin, Chair, Microbiology Search Committee, Department of Microbiology, University of Tennessee, Knoxville, TN 37996-0845**. Screening of applications will begin January 2, 2002. For additional information about The Department of Microbiology, please see **website: http://www.bio.utk.edu/microbio.nsf**. *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 Institution in the provision of its Education and Employment programs and services.*

FACULTY POSITIONS
NEUROINFORMATICS
I.D. Number 12090

Two **RESEARCH ASSISTANT PROFESSOR** (nontenure-track) positions are available immediately to join an interdisciplinary team working on a new five-year neuroinformatics project as part of the NIH Human Brain Project. The projects are centered at University of Illinois at Chicago College of Medicine but involve coordinating activities within a consortium of leading research groups. The overall goal is to develop and test new informatics tools to help Scientists formulate hypotheses, assess research findings, and facilitate multilaboratory collaborations. Candidates should have Ph.D. and/or M.D. degree, computer programming experience, and expertise in one or more of the following areas: information science, computational biology, computational linguistics, computer visualization, data mining, databases, user interface design, bioengineering, cognitive science, or neuroscience. Please send curriculum vitae; a statement of interests; and the names of three references by February 1, 2002, by **e-mail** to: **ecasas@psych.uic.edu**. Mailing address: **Neil R. Smalheiser, M.D., Ph.D., c/o Ena Casas, Department of Psychiatry, MC912, University of Illinois at Chicago, 1601 West Taylor Street, Chicago, IL 60612. Telephone: 312-413-4581**. *UIC is an Affirmative Action/Equal Opportunity Employer.*

DYAX CORPORATION is a biopharmaceutical company that has developed and patented phage display technology with applications in the discovery and development of a broad range of compounds for the treatment and diagnosis of diseases and for the purification and manufacture of biopharmaceuticals and other chemicals. Through the use of phage display technology, Dyax's Scientists, collaborators, and licensees seek to discover peptides and proteins (including human antibodies) that bind tightly to specific molecular targets.

In this newly created, hands-on position, you will be responsible for developing cell culture systems and cell-based assays as well as heterologous protein expression systems. Additionally, you will carry out analytical cell-based activity assays, phage library selections, and phage isolate binding assays. You will also play a critical role in characterizing the *in vitro* efficacy of internally developed therapeutic agents. A B.S./M.S. in cell biology, molecular biology, or biochemistry with at least three years of relevant experience is required. **Dyax Corporation, One Kendall Square, Cambridge, MA 02139**. Please apply at **website: http://www.dyax.com**.

POSITIONS OPEN

FACULTY POSITION
Medical Biotechnology Center
University of Maryland Biotechnology Institute

The Medical Biotechnology Center (MBC) of the University of Maryland Biotechnology Institute (UMBI) seeks applications for a tenure-track faculty position at the **ASSISTANT, ASSOCIATE**, or **FULL PROFESSOR** level (Position F3-0107). The MBC is one of five research centers of the UMBI (**website: http://www.umbi.umd.edu**). The MBC is located on the campus of the University of Maryland, Baltimore, in a newly constructed, state-of-the-art research facility.

We seek outstanding candidates with expertise in one or more of the following disciplines: molecular and cell biology, cellular physiology and biophysics, transgenics, or functional genomics/proteomics. The precise scientific displine is less important than a demonstrated record of excellence, originality, and productivity in research. Applicants for Associate Professor or Professor must have an externally supported research program and a substantial publication record.

Applicants should send a letter of application (please indicate position sought: Assistant, Associate, or Full Professor); curriculum vitae; a description of research accomplishments; a two-page statement of research interests and objectives; and arrange to have letters of references sent from appropriate references (three for an Assistant Professor position and eight for an Associate or Full Professor position). For the Assistant Professor position, references should be from at least two institutions; for Associate or Full Professor positions, from at least three institutions. All materials (including letters of reference) must be received for the application to be considered. Review of applications will begin February 1, 2002, and continue until a suitable candidate is selected.

Please send applications and letters of reference to: **Mr. T. Hughes, Coordinator, Faculty Search Committee, MBC, University of Maryland Biotechnology Institute, 725 West Lombard Street, Baltimore, MD 21201 U.S.A.**

MBC/UMBI is an Affirmative Action/Equal Opportunity Employer. Women, minorities, veterans, and candidates with disabilities are encouraged to apply.

FACULTY POSITION in anatomy and physiology. The Middle Tennessee State University Biology Department invites applications for an **ASSISTANT/ASSOCIATE PROFESSOR**-level, tenure-track position. Ph.D. required by August 2002 start date. Teaching responsibilities include human anatomy/physiology and general biology for majors/nonmajors. Research/public service expected. Postdoctoral experience a plus. Applicant review begins 15 January 2002. Send application letter referencing position number (103120), curriculum vitae, transcripts, teaching philosophy, evidence of successful undergraduate teaching, research interests, and proof of employment eligibility. Have three letters of reference forwarded to: **Dr.Gore Ervin, Search Committee Chair, Box 60, MTSU, Murfreesboro, TN 37132-0001. E-mail: mervin@mtsu.edu; website: http://www.mtsu.edu**. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION is available in a cardiac biochemistry laboratory to investigate metabolic basis of diabetic heart disease. Experience is necessary in protein and RNA isolation; Northern, Southern, and Western blotting; histology/staining procedures; and managing colonies of genetically manipulated mice. Applicants should send curriculum vitae and names of three references to: **Ravi Ramasamy, Ph.D., Division of Cardiology, College of Physicians and Surgeons, Columbia University, PH 10 Stem 403, 630 West 168th Street, New York, NY 10032. FAX: 212-305-4648**. *We take Affirmative Action toward Equal Employment Opportunity. Applications from women and minorities are encouraged.*

POSITIONS OPEN

FACULTY POSITION

The Department of Medicinal Chemistry and Molecular Pharmacology at Purdue University (**website: http://www.pharmacy.purdue.edu/~mcmp/**) invites outstanding Scientists to apply for a faculty position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. We seek a Scientist with research interests at the chemistry-biology interface and a focus in neuroscience relevant to drug discovery and/or development that complement our existing strengths. Those candidates using analytical and quantitative approaches including (but not limited to) modern genomic, proteomic, or computational sciences are especially encouraged to apply. The successful candidate will be expected to establish or maintain a strong, extramurally funded research program. Commitment to excellence in teaching at the undergraduate and graduate levels is required. The Department offers a vigorous and growing research environment with first-rate analytical instrumentation and numerous opportunities to participate in interdepartmental campus programs in neuroscience, genetics, structural biology, and biochemistry and molecular biology. Candidates must hold a Ph.D. and junior-level applicants are expected to have at least two years of postdoctoral training. Applicants should submit curriculum vitae, a detailed description of research plans, and arrange to have three letters of reference sent to: **Chair, Faculty Search Committee, Department of Medicinal Chemistry and Molecular Pharmacology, 1333 RHPH, Purdue University, West Lafayette, IN 47907-1333**. *Purdue University is an Equal Opportunity/Equal Access/Affirmative Action Employer and encourages the nomination and application of women and minority candidates.*

CHIEF
Child and Adolescent Psychiatry

The Department of Psychiatry at The University of Texas Southwestern Medical Center at Dallas is seeking outstanding candidates for the position of Chief of the Division of Child and Adolescent Psychiatry. The Chief will lead a division that is already at the forefront of academic child psychiatry in the country and is now poised to grow significantly in the years ahead. Applicants must have or be able to obtain a Texas medical license. The successful candidate will have an established track record in either clinical or basic psychiatric research and/or in psychiatry administration. Attractive packages are available. Please submit curriculum vitae, cover letter, and names of three references to:

Dr. Eric J. Nestler
Chairman, Department of Psychiatry
The University of Texas Southwestern
Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75390-9070

The University of Texas Southwestern Medical Center is an Equal Opportunity Employer.

PLANT PHYSIOLOGICAL ECOLOGY

POSTDOCTORAL POSITION available to participate in research on the physiology of water utilization in forest trees. A recent Ph.D. in plant physiology, ecophysiology, or related field is required and an interest in conducting and integrating research at multiple scales is highly desirable. Applicants must have well-developed organizational skills to handle complicated logistics of fieldwork in remote locations, a track record of peer-reviewed scientific publication, and demonstrated facility for teamwork and interaction. The position will be filled at the U.S. Government GS-11 level. Applications will be accepted until the position is filled. Please send curriculum vitae and contact information for three references to: **Frederick Meinzer, U.S. Department of Agriculture Forest Service, Forestry Sciences Laboratory, 3200 S.W. Jefferson Way, Corvallis, OR 97331. E-mail: fmeinzer@fs.fed.us**.

USDA, AGRICULTURAL RESEARCH SERVICE
SUBARCTIC AGRICULTURAL RESEARCH UNIT
FAIRBANKS, ALASKA

A Research Leader position is open immediately at the GS-14/15 level. U. S. citizenship is required. Salary is commensurate with experience in the range of $67,765 to $103,623 plus 25% cost of living adjustment and benefits. **There is a potential for a 4.6% general increase in January 2002.** The incumbent provides leadership to a multi disciplinary team and contributes to cooperative efforts with other ARS, public and private research programs. The mission of the unit is to improve the understanding and control of invasive plant pests, plant pathogens or weeds of agricultural importance in subarctic cropping and Alaskan natural systems, to collect and preserve important Arctic plant germplasm resources, and to develop effective and economical utilization of byproducts from fish processing. A Ph.D. or equivalent degree, postdoctoral research experience, demonstrated expertise and research productivity as it relates to the control of invasive plant pests, plant pathogens or weeds are desired. Applicants must address and meet specific placement factors and specialized experience as defined in the official vacancy announcement #ARS-X2W-2036. The vacancy announcement and application forms can be obtained by calling **301-504-1482 or through the web at www.ars.usda.gov. All applications must be postmarked by February 1, 2002. For further information contact Veronica Cullum at 510-559-6071 (fax: 510-559-5779).**

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Chiron Corporation is a leading biotechnology company applying scientific approaches to discover, develop, and commercialize healthcare products for the prevention and treatment of cancer and infectious diseases. The company is involved in three global businesses: biopharmaceuticals, vaccines, and blood testing. The company uses a variety of approaches like genomics and recombinant DNA technology to discover and develop pharmaceutical and vaccine products. Products include recombinant proteins, DNA and viral vectors as well as small molecules. This position of Scientist in Process Development will contribute to the development of cell lines, fermentation processes, and recovery processes for microbial/animal cell proteins, plasmid DNA, and viral vectors used in pre-clinical, clinical, and commercial applications.

Plan and direct the development of microbial/mammalian cell culture processes and product recovery processes. Collaborate with research and development scientists in the areas of expression systems, purification, and analytical methods in order to optimize productivity of potential products. Represent the department on multi-disciplinary project teams. Requires Ph.D. or equivalent in development experience in Cell Biology, Cell Physiology, Biochemistry, Microbiology or Biochemical Engineering. Should have experience in microbial or animal cell culture processes to include cell line selection, media development, bioreactor operation or recovery operations. Candidates will be preferred who have strong problem-solving, analytical, and experimental design skills.

Competitive starting salary based on experience, and eligibility for bonus and stock options. To apply, please send resume, indicating **Job #SL5209**, to jobs@chiron.com.

www.chiron.com

GNF

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We seek outstanding researchers to develop innovative combinatorial, medicinal and biological chemistry solutions to challenging problems in biomedical research. Successful candidates will interact closely with a state-of-the-art, integrated technology platform (genomics, proteomics, structural and computational biology), and biomedical research programs in neurobiology, immunology, signal transduction/cancer biology and microbiology/virology.

DISCOVERY SCIENTISTS

IMMUNOLOGIST - Staff Scientist level position available requiring 3+ years' postdoctoral experience, and strong record of accomplishments in the field of immunology. Individuals with experience in the application of current genomics techniques including RNA expression profiling, cell-based screens, and the use of in vivo models (induced mutations, transgenics/knockouts) to solve critical problems in immunology are especially encouraged to apply. **Job Code: Dr. Michael Cooke, Department Head**

NEUROBIOLOGIST - Staff scientist level position requiring 3+ years' excellent postdoctoral training, a strong publication record, and an innovative research program addressing key topics in molecular and cellular neurobiology. The position includes funding for post-doctoral fellows and research associates, and access to innovative resources, including high-throughput cell-based screening, genomics and proteomics tools, and in vivo models. Please send a CV and a short description of your research to **Job Code: Dr. Ardem Patapoutian, Department Head**

POSTDOCTORAL ASSOCIATE - Position immediately available to use full-genome technologies and the Saccharomyces cerevisiae in the development of novel antifungals. Individuals should possess a doctoral degree with training in molecular biology/biochemistry or microbiology. Experience with genomics, bioinformatics, DNA arrays, Saccharomyces cerevisiae, fungal pathogenesis, and drug development useful but not essential. **Job Code: Dr. Elizabeth Winzeler, Staff Scientist**

POSTDOCTORAL ASSOCIATES - Three positions immediately available in the area of Cancer Biology for candidates who are highly motivated with the potential of initiating and maintaining projects and collaborations that take advantage of GNF technologies. Applicants should have publication records demonstrating significant scientific contribution, independence, strong problem-solving abilities and thoughtful experimentation. **Job Code: Dr. Garret Hampton, Dept. Head and Dr. Quinn Deveraux, Staff Scientist**

BIOMEDICAL RESEARCH CENTER

CHEMISTS - We are interested in chemists with academic and/or pharmaceutical research experience (B.S., M.S., Ph.D.) who desire to participate in building a world class chemistry program that includes both the development and application of new technologies and chemistries. **Job Code: Dr. Peter G. Schultz, Institute Director**

BIOLOGISTS - Biologists will combine functional small molecule, cDNA expression and antibody library screens with custom ultra-high throughput robotic systems to identify critical effectors in disease. We are interested in biologists/biochemists with academic and/or industrial research experience (B.S., M.S., Ph.D). We also seek outstanding individuals with experience in cutting-edge laboratory robotics and automation. **Job Code: Dr. Jeremy Caldwell, Director of Cell and Molecular Biology**

Please submit CV and any supporting documents to:
The Genomics Institute of the Novartis Research Foundation (GNF)
Job Code: (please specify)
3115 Merryfield Row, Suite 200
San Diego, CA 92121
FAX: 858/812-1670 or Email: jobs@gnf.org
(subject line must include Job Code)

The Genomics Institute of the Novartis Research Foundation (GNF), located in the Torrey Pines area of San Diego, CA, is funded by the Novartis Research Foundation and dedicated to the development and application of new methods and techniques for genome-wide biological discovery and biomedical research. GNF offers excellent compensation and a great benefit package. EOE

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Assistant Professor in Cell Signaling
Biology

The Department of Biology at the University of Massachusetts Boston seeks applicants for a position in cell signaling or closely related fields at the Assistant Professor level for a full-time, tenure-track position to start in September 2002. The successful applicant is expected to establish an externally funded research program and to direct the research of students at the undergraduate, master's and doctoral levels. Applications will be particularly welcome from candidates who utilize bioinformatic, genetic, molecular or cellular approaches and who can participate in a vibrant interdisciplinary Ph.D. program by applying basic cellular or molecular research to environmental problems. A strong commitment to teach undergraduate and graduate courses in cell biology, developmental biology, or general education for non-science majors is expected. Candidates should demonstrate the potential to establish a strong, independent research program; therefore, a Ph.D. and postdoctoral experience (or equivalent professional experience) in molecular or cellular biology are required.

Send statement of research interests, curriculum vitae and three letters of reference to University of Massachusetts Boston, Human Resources, Search 670, 100 Morrissey Blvd., Boston, MA 02125. Application review will begin on January 5, 2002, and continue until the position is filled. For information regarding the position, please visit our website at www.bio.umb.edu or e-mail kenneth.kleene@umb.edu. Women and minorities are encouraged to apply.

An Affirmative Action, Equal Opportunity, Title IX employer.

UMASS University of Massachusetts Boston
www.umb.edu

POSITION AVAILABLE:

The Section on Cellular Neurophysiology of the Intramural Research Program (IRP), National Institute on Drug Abuse (NIDA), National Institutes of Health (NIH), is seeking a basic neuroscientist for a tenure/tenure-track position in the areas of neurodegeneration, neuroregeneration, and neurotrophic factors. Candidates must have a Ph.D., M.D., or D.O. degree, and have documented expertise and an outstanding track record in studies of animal models of neurodegenerative diseases, including histochemical, physiological, and behavioral indices. Experience should also include supervision of postdoctoral fellows and research staff. Additional expertise in the actions and structural/functional effects of abused drugs is also desirable, especially with respect to neurodegenerative processes.

The salary level is competitive and includes a full Federal benefits package. The successful candidate may also qualify for up to $35,000 in annual repayment of student loans. Interested candidates must submit a Curriculum Vitae with bibliography, a description of future research plans (no more than 5 pages), three letters of recommendation from non-collaborators, and a copy of the doctoral degree (if in a foreign language include a certified English translation) to: Morgan DuBrow, Chief, Human Resources Management Section, NIH/NIDA/IRP, 5500 Nathan Shock Drive, Building C, Room 247, Baltimore, MD 21224.
Mr. DuBrow is available on 410-550-1638, FAX 410-550-2224, e-mail **MDUBROW@intra.nida.nih.gov.** Applications must be received by close of business on January 14, 2002. Late applications will not be considered. Applicants may apply via mail, in person, by fax, or by e-mail.

The NIH is an Equal Opportunity Employer and applications from women and minority candidates are encouraged.

NIDA NATIONAL INSTITUTE ON DRUG ABUSE
NATIONAL INSTITUTES OF HEALTH

Fellowships in Oceanography for Minority Undergraduates

The Woods Hole Oceanographic Institution offers special educational opportunities in oceanography for minority undergraduate U.S. citizens or permanent residents. These awards are designed to provide training and research experience in Woods Hole for students who have completed at least two semesters of undergraduate study in physical or natural science, mathematics, or engineering and have an interest in marine sciences, oceanographic engineering or marine policy.

Fellowships may be awarded for a ten to twelve week period in the summer or for a semester during the academic year and may be renewed the following year. The Fellow is paid a stipend of $355 per week, plus round trip travel allowance from their home school or university to Woods Hole. This program is conducted with support from and in cooperation with the Woods Hole Field Center, U.S. Geological Survey.

Application deadline for Summer 2002 is February 15, 2002.

Application forms can be obtained from WHOI's website:
http://www.whoi.edu/education/

or write:

WOODS HOLE OCEANOGRAPHIC INSTITUTION

Education Office, MS #31
Woods Hole Oceanographic Institution
360 Woods Hole Road
Woods Hole, MA 02543-1541
or call: (508) 289-2219
or email: education@whoi.edu

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Sanofi~Synthelabo Group
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Sanofi-Synthelabo is one of the fastest growing pharmaceutical companies of the world. The group represents itself with two companies in Hungary: a commercial unit, Sanofi-Synthelabo Ltd. and CHINOIN Pharmaceutical and Chemical Works Co. Ltd. including a Research and Development site and a production plant operating on high-tech level.

A new managerial position has opened in the research site, reporting to local head of discovery. The successful candidate will have 8-10 years of experience in experimental pharmacology, with special knowledge in endocrinology or obesity or diabetes. Experience in inflammation models is an advantage.

Responsibilities include:
- Coordinating and representing the pharmacological activities of the Budapest site, especially in case of products entering development
- Promoting advancement of Discovery projects

This position requires a university degree (Pharmacologist, Physician, Biologist, Pharmacist or Veterinarian) and PhD with a deep knowledge of biological science. Industrial background is preferred. Good command of English, speaking French are important, speaking Hungarian is an advantage. The successful candidate will have user's experience with general and laboratory softwares.

If you want to join our team you can expect ambitious projects and attractive remuneration packages.
Please submit your application along with a detailed C.V. lists of publications, and two references to:

Éva CSÁKVÁRI
HR Director
CHINOIN Pharmaceutical and Chemical Works CO. Ltd.
1045 Budapest Tó u. 1-5.
Phone and fax: (361)369-4899
E-mail: eva.csakvari@sanofi-synthelabo.com

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

The **National Research Council**

is seeking applications for

Postdoctoral Research Awards

tenable at the

US Army Medical Research Institute of Infectious Diseases *in* Frederick, MD

The National Research Council will offer several awards on a competitive basis for postdoctoral research to productive, highly motivated, and energetic individuals. Research is to be conducted in discovery and applied research involving molecular biology, genomics/proteomics and/or bioinformatics, biochemistry, cellular and molecular immunology, clinical immunology, bacterial and viral pathogenesis, molecular pathogenesis of infectious diseases, and molecular virology. Opportunities exist to elucidate cellular and molecular mechanisms of toxins and pathogenic organisms, and to study innate and adaptive immune responses to bio-threat agents. The goals are to develop vaccines and novel therapeutics against agents including, but not limited to Ebola and Marburg viruses, poxviruses, hantaviruses, alphaviruses, flaviviruses, *Bacillus anthracis*, *Yersinia pestis*, *Burkholderia maleii*, emerging bacterial superantigens, and botulinum toxins.

Stipends begin at $43,000 per year with increments based on years of experience. Qualified applicants should have a Ph.D. and, in some cases, US citizenship may be required. Awards are for one year with possible renewal for up to three years maximum.

Prospective applicants must submit to Dr. Sina Bavari at USAMRIID: 1) a statement with expertise and research interest, 2) curriculum vitae and publication list, and 3) the names and addresses of three references.

Sina Bavari, Ph.D., Cell Biology & Biochemistry
US Army Medical Research Institute of Infectious Diseases
1425 Porter Street, Frederick, MD 21702-5011
E-mail: sina.bavari@amedd.army.mil

Postmark deadlines for application are January 15, April 15 and August 15. For application materials, see the NRC Web site at:

www.national-academies.org/rap

For questions or assistance contact the NRC at:

Tel: 202-334-2760
Fax: 202-334-2759
E-mail: rap@nas.edu
Mail: National Research Council
2101 Constitution Ave NW, TJ 2114
Washington, DC 20418

Assistant Professor (Research) Mouse Transgenics Division of Biology and Medicine Brown University

The Division of Biology and Medicine at Brown University announces the opening of a faculty position at the Assistant Professor (non-tenure track) level in mouse transgenics to begin July 1, 2002.

Qualifications include a Ph.D., M.D. or equivalent degree and a demonstrated track record of excellence in research. The desirable specialized background will include hands-on experience in the construction of transgenic and knock-out mouse strains. The applicant will be encouraged to pursue an independent, externally funded research program emphasizing mouse transgenics, and will receive internal support for managing a newly established core facility. The successful applicant will be expected to be an active collaborator in a strategic initiative in genetics and genomics and to participate in predoctoral training programs in the Division of Biology and Medicine.

The Search Committee will give full consideration to applications received by March 1, 2002 that include a curriculum vitae, description of research interests, and at least three letters of reference. Application materials should be sent to: **Dr. John Marshall, c/o Ms. Tammy Glass, Department of Molecular Biology, Cell Biology and Biochemistry, Brown University, Box G-J223, Providence, RI 02912.**

Brown University is an EEO/AA Employer and invites applications from women and minorities.

Dean
School of Science
Purdue University

Purdue University invites applications and nominations for the position of Dean of the School of Science. The School of Science is made up of seven departments: Biological Sciences, Chemistry, Computer Sciences, Earth and Atmospheric Sciences, Mathematics, Physics, and Statistics. The School has 290 faculty and 385 staff, and it enrolls ca. 3,000 undergraduate students and 900 graduate students.

The Dean's primary missions are to provide vision and leadership in the School and to foster an interdisciplinary academic community pursuing excellence in learning, discovery, and engagement. An important responsibility of the Dean is fund raising for the many programs of the School. Qualified candidates will have distinguished research and teaching records appropriate for a tenured full professorship and demonstrated excellence in academic administration. Desirable candidates will have a record of administrative accomplishments, skills in securing and allocating resources to provide quality undergraduate and graduate education and research, and experience in strategic planning. They will be sensitive to all the constituencies served by the University and will be able to articulate and advocate the goals of the School, among which are strong commitments to cultural and ethnic diversity and gender equity.

Applications should be sent to: **Dean Charles O. Rutledge, Chair, School of Science Dean Search Committee, Purdue University, School of Pharmacy, 1330 Heine Pharmacy Building, West Lafayette, IN 47907-1330; email chipr@pharmacy.purdue.edu.** Screening will begin December 1, 2001, and continue until the position is filled. The School of Science website can be accessed at www.science.purdue.edu for information about the School.

Purdue University is an Equal Opportunity/Affirmative Action Employer. Minority and women candidates are especially encouraged to apply.

Nutritional Toxicologist
Departments of Nutrition and Environmental Toxicology
University of California, Davis
ASSISTANT/ASSOCIATE PROFESSOR
http://nutrition.ucdavis.edu/faculty/recruitment/

A tenure-track position is available in the Departments of Nutrition (80%) and Environmental Toxicology (20%), for an Assistant/Associate Professor and Assistant/Associate Nutritional Toxicologist in the Agricultural Experiment Station, College of Agricultural and Environmental Sciences. The nine-month tenure/eleven-month term appointment requires teaching, research and service.

We are especially interested in individuals who have, or will establish, a strong research program in nutritional toxicology. The candidate must have demonstrated skills in areas important to molecular biology, metabonomics or proteomics. Strongest consideration will be given to those with a documented commitment to areas, such as developmental toxicology and nutritional toxicology. The successful applicant will be expected to have or to develop an internationally recognized independent and well-funded research program, to teach at the undergraduate and graduate level, to train and supervise students and to collaborate with established programs within the Department and University. Applicants at the Associate level must have demonstrated excellence in research and teaching.

Send resume, transcripts (official transcripts are required if the Ph.D. was granted in the past five years), list of publications, detailed statement of past experience and future research plans and teaching interests as well as the names of three references to: **Dr. Robert Rucker, Chair, Search Committee, Nutrition Dept., One Shields Avenue, University of California, Davis, CA 95616-8588. Email: rbrucker@ucdavis.edu. Dr. Marion Miller, Chair, Department of Environmental Toxicology may also be contacted (E.Tox. Dept., One Shields Avenue, University of California, Davis, CA 95616-8588. Email: mgmillersears@ucdavis.edu)**. The position will remain open until filled; to assure consideration, applicants should apply by January 15, 2002.

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

Research Molecular Biologist (Plants) GS-0401-12/13

The U.S. Department of Agriculture, Agricultural Research Service, Wheat, Sorghum, and Forage Research Unit which is stationed on the East Campus, University of Nebraska-Lincoln is seeking a Research Molecular Biologist GS-12/13. Salary Range is $51,927 to $80,279 and is commensurate with experience. Candidates must be U.S. citizens. The incumbent is a member of a research team that is developing elite sorghum germplasm with improved grain yield and grain quality and with genetic resistance to diseases. The incumbent is responsible for conducting research using biochemical and molecular genetics technology including plant transformation to identify, characterize, and facilitate the transfer of desirable genes affecting economically important traits of sorghum. The other scientists on the team are a plant geneticist who will have major responsibilities for the plant genetics and field trial components of the research and a research plant pathologist who will be responsible for the pathogen component of the research. Much of the research will be conducted in cooperation with these and other ARS and University scientists.

Candidates must have a degree in plant molecular biology or plant molecular genetics or a related scientific discipline. The position has specific education and experience requirements that must be addressed. These include advanced knowledge of plant molecular biology, biochemistry, and plant physiology and skill in molecular biology techniques such as gene isolation and characterization, modern protein isolation/ identification techniques, mapping and cloning of plant genes, and plant transformation. In order to ensure submission of a complete application, applicants must request a copy of the Vacancy Announcement by calling **301-504-1484** or by printing from the **website: http://www.afm.ars.usda.gov/divisions/hrd/index.html** and referencing position ARS-X2W-2037. Additional information on the position can be obtained by contacting **K.P. Vogel at 402-472-1564. Applications must be post-marked by January 28, 2002.**

USDA/ARS is an Equal Opportunity Employer and Provider.

Opportunity for Obtaining DNA Sequence of Regions of High Biomedical Interest from Model Organism Genomes

The National Institutes of Health is announcing the continuation of the BAC Sequencing Program. The list of organisms eligible for sequencing includes all animals, fungi, and eukaryotic protists (http://grants.nih.gov/grants/guide/notice-files/NOT-HG-02-002.html). This program change is intended to address the interest of the larger biomedical research community in obtaining sequence information about specific regions of genomic DNA of biomedical or biological significance.

Several of the sequencing centers in the National Human Genome Research Institute's Genome Sequencing Network will dedicate a fraction of their sequencing capacity to this initiative. Investigators may submit requests to have one or more BAC clones sequenced from one or more eligible organisms (plants and prokaryotes are excluded). Requests may be for 4-fold coverage, 6-10-fold coverage, or finished sequence. BAC(s) sequenced from the mouse RPCI-23 library or the Norway brown rat BAC library will be finished so that the sequence will be maximally useful to the centers generating the sequence of the entire genome. Requestors whose projects have been approved using clones from BAC libraries other than RPCI-23 must provide the BAC clone(s) to the participating sequencing centers.

An investigator interested in obtaining the sequence of a specific region of genomic DNA that has been cloned in a BAC may submit a short, Web-based request describing the region, its importance, and its readiness to be sequenced. A panel of peer reviewers will consider the requests and advise the NHGRI on the priority of the regions requested. Those judged to be sufficiently important to warrant priority sequencing will be listed for the centers engaged in mouse genomic sequencing to choose and sequence, up to the maximum capacity available for this activity.

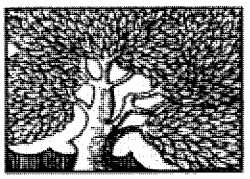
There will be no cost to investigators seeking this sequencing service; the sequencing will be done by centers that have already been funded through the Network. However, as with all sequence data generated by the Human Genome Project, unfinished data will be submitted to GenBank within 24 hours of generation of 2kb assemblies, and finished data as soon as completed. No sequence data will be made available to the requestor prior to public release. All publications using this data must acknowledge the publicly funded sequencing effort. If BAC clones that are approved for sequencing are not available commercially, the requestor must agree to make the clone(s) available for distribution in an expeditious manner upon publication using any or all of the data generated by the public effort.

For more complete description of the program and to access the request form, please visit our website: http://mouse.info.nih.gov.

Submission dates for 2002: January 1, May 1, and September 1 (If the submission date falls on a holiday or weekend, requests must be submitted by the next workday.)

To discuss programmatic issues contact:
Bettie J. Graham, Ph.D.
National Institutes of Health
Bethesda, MD 20892-2033
E-mail: bettie_graham@nih.gov
Tel: (301) 496-7531

To discuss review issues contact:
Jerry Roberts, Ph.D.
National Institutes of Health
Bethesda, MD 20892-2032
E-mail: jerry_roberts@nhgri.nih.gov
Tel: (301) 402-0838



2002 Weizmann Women & Science Award

Call for Nominations

The American Committee for the Weizmann Institute of Science invites nominations for the 2002 Biennial Women & Science Award. Established in 1994, the award will be given to an outstanding woman who has made significant contributions to the scientific community. The objectives of the award, which includes a $25,000 research grant to the recipient, are to recognize distinguished achievement and to provide a more valuable role model to motivate and encourage the next generation of young women scientists, engineers and mathematicians.

Nominees may represent any discipline in the natural sciences, and may be conducting research in either the public or private sector.

To request a nomination application, please contact Liz Jaffe, Vice President of National Programs, American Committee for the Weizmann Institute of Science, 212-895-7907 or by email: Liz@acwis.org. The nomination application must include background documentation, i.e. curriculum vitae, as well as a supporting statement by the nominator. Nominations must be postmarked by January 28, 2002 and sent to: **Women & Science Award, ACWIS, 130 E. 59th Street, New York, NY 10022, or by fax to 212-895-7993.**

Past awardees are:

1994 Joan Argetsinger Steitz, Henry Ford Professor of Biophysics, Yale University and Investigator, Howard Hughes Medical Institute

1996 Vera Rubin, Observational Astronomer, Department of Terrestrial Magnetism, Carnegie Institution, Washington DC

1998 Jacqueline K. Barton, The Arthur and Marian Hanisch Memorial Professor of Chemistry, California Institute of Technology, Pasadena, CA

2000 Carla J. Shatz, Nathan Marsh Pusey Professor and Chair, Department of Neurobiology, Harvard Medical School, Boston, MA

2000 Dr. Mildred D. Dresselhaus, Institute Professor of Electrical Engineering and Physics, Massachusetts Institute of Technology (Received the Millennial Lifetime Achievement Award).

The award presentation is scheduled to take place at The Rockefeller University on Monday, June 3, 2002.

Smithsonian Tropical Research Institute

The Smithsonian Tropical Research Institute (STRI), a division of the Smithsonian Institution headquartered in the Republic of Panama, offers fellowships for research conducted with the advice and guidance of its staff members. Disciplines include ecology, anthropology, paleontology, evolution, systematics, behavior and physiology of tropical plants and animals.

- **Earl S. Tupper 3-year postdoctoral fellowship** (deadline: Jan 15). Applications should include detailed research proposal with budget, curriculum vitae, 2 letters of reference, names and telephone numbers of 3 additional references and reprints of most important papers. Applicant should consult with STRI scientist who will serve as advisor before submitting final application. Annual stipend up to $30,000 with yearly travel and research allotments. Proposals that include comparative research in other tropical countries will be considered. Send inquiries and application to STRI/Office of Education, Unit 0948, APO AA 34002-0948, from US or Apartado 2072, Balboa, Panama from Latin America, fellows@tivoli.si.edu or www.stri.org
- **Predoctoral, postdoctoral, senior postdoctoral (up to 1 year) and 10-week fellowships.** Available through the Smithsonian's Office of Fellowships, Washington, DC (deadline: Jan 15). For information: OFG, 750 9th Street NW, Suite 9300, Washington, DC 20560-0902, siofg@ofg.si.edu, www.si.edu/research+study.
- **Three-month fellowships** (deadline: Feb 15, May 15, Aug 15, Nov 15) thru STRI. For information: STRI/Office of Education, Unit 0948, APO AA 34002-0948, from US or Apartado 2072, Balboa, Panama from Latin America, fellows@tivoli.si.edu or www.stri.org

Awards are based upon merit, without regard to race, color, religion, sex, national origin, age or condition of handicap of the applicant.

Faculty Position
Quantitative Biologist
Department of Zoology

FACULTY POSITION, Quantitative Evolution/Ecology

The Department of Zoology, University of Wisconsin-Madison, invites applications for a tenure-track position at the **Assistant Professor** level, beginning August 2002. Requirements include a Ph.D and Post-doctoral experience in quantitative evolutionary biology or quantitative ecology and demonstrated research accomplishments. Teaching will include courses at the undergraduate and graduate level. For additional information see our departmental website: **http://www.wisc.edu/zoology**. Applicants should submit curriculum vitae, description of research plans, teaching philosophy, and three letters of recommendation via U.S. mail to:

Quantitative Evolution/Ecology Search Committee
University of Wisconsin-Madison
Department of Zoology
430 Lincoln Drive
Madison, WI 53706-1794
Phone 608-262-1725 or 608-262-1051; FAX 608-262-9083;
Email: zoology@ls.wisc.edu or
cacooley@facstaff.wisc.edu

Only applications submitted by mail will be accepted. No email submissions accepted. Application Deadline: January 30, 2002

An Equal Opportunity/Affirmative Action Employer.
Women and minorities are encouraged to apply.
Unless confidentiality is requested in writing information regarding applicants must be released upon request.
Finalists cannot be guaranteed confidentiality.

UCSB

Assistant Professor in Environmental Biology at the Bren School, UC Santa Barbara

The Donald Bren School of Environmental Science & Management (http://www.bren.ucsb.edu/) invites applications for a tenure-track Assistant Professor position, starting July 1, 2002. Particularly attractive to us is a research agenda concerned with the effects of environmental contaminants or other environmental stressors on the genetics, physiology, behavior, or demography of higher organisms. The successful candidate will help to meet our curricular need for more field biology, experimental design, and laboratory science and will complement our strengths in fate and transport of pollutants, microbiology and conservation ecology. The successful candidate will also have an interest in contributing to environmental policy formation in areas pertaining to his or her research. Send applications to: **Environmental Biology Search Committee, Donald Bren School of Environmental Science & Management, University of California, Santa Barbara, CA 93106; e-mail biology@bren.ucsb.edu; fax (805) 893-7612.** The Ph.D. is normally required at the time of appointment, and postdoctoral experience is desired. Applications must include a curriculum vitae, a statement of research interests and teaching philosophy, and copies of no more than 3 refereed publications. Please arrange for 3 letters of reference to be sent in support of the application. For fullest consideration, we should receive all material by January 15, 2002, although the position will remain open until filled. *The University of California is an Equal Opportunity/Affirmative Action Employer. We encourage all qualified applicants to apply, including minorities, women, and persons with disabilities.*

SK

BIO-PHARMACEUTICALS

- **CLINICAL RESEARCH LEADER** Experience in CNS and clinical compound evaluation desired
- **CLINICAL RESEARCH ASSOCIATE**
- **SYNTHETIC ORGANIC CHEMIST**
- **COMBINATORIAL CHEMIST**
- **ANALYTICAL BIOCHEMIST** ADME and HTS receptor binding experience desired
- **MOLECULAR BIOLOGIST** Experience in diabetes desired

BS/MS/PhD candidates with a minimum of 3 years pharmaceutical industry experience desired. Qualifying candidates should forward *CV* with cover letter to: **Human Resources Department, SK Bio-Pharmaceuticals, 140 New Dutch Lane, Fairfield, NJ 07004. Fax: (973) 227-4488. Email: cson@sk-bp.com.**

EMBL

The European Bioinformatics Institute (EBI)

Hinxton, nr. Cambridge, UK

The European Molecular Biology Laboratory (EMBL), an international research organisation with its Headquarters Laboratory in Heidelberg (Germany), Outstations situated in Grenoble (France), Hamburg (Germany) and Hinxton (UK), and a Research Programme at Monterotondo (Italy) has the following vacancy **in Hinxton, UK:**

COORDINATOR
The EBI Industry Programme

EMBL's Outstation, The European Bioinformatics Institute (EBI) seeks a Coordinator for its Industry Programme. The EBI carries out research, service and training in bioinformatics. Its Industry Programme manages the relationship with the commercial sector in bioinformatics. Resources provided by industry are used to support activities dedicated to industry and to strengthen existing projects of particular industrial relevance. This includes research and development work in the EBI's research groups, technology tracking, and an extensive training programme.

The appointee will coordinate these activities by:

- being the point of contact for representatives of the companies concerned
- running the collaboration with industry and the quarterly meetings which monitor recent activities and set the future agenda
- acting as a focus for the industry supported R&D activities throughout the EBI, both in reporting back to industry and seeking out new opportunities
- developing the programme of training courses to be offered, in light of the wishes of the industrial user community, and the expertise of EBI teams
- investigating opportunities for the Industry Programme to evolve to include new activities, new member companies and new funding methods.

The successful candidate will almost certainly have a PhD in a biological science and considerable postdoctoral experience which gives insight into commercial life-sciences research. Understanding of the role of bioinformatics in research will be more important than informatics expertise, making the post suitable for a researcher with some background as a bioinformatics user rather than as a developer.

Closing date for applications: 10 December 2001
Commencing date: As soon as possible after closing date

EMBL WWW pages: http://www.embl-heidelberg.de/
and **http://www.ebi.ac.uk/**

EMBL is an inclusive, equal opportunity employer offering attractive conditions and benefits appropriate to an international organisation.

To apply please send a complete CV, quoting ref. no. 01/169 to:

The Personnel Section, EMBL, Postfach 10.2209, D-69012 Heidelberg, Germany. Fax: +49 6221 387555; email: jobs@embl-heidelberg.de

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Affymetrix' GeneChip® technology, the preeminent platform for acquiring, analyzing and managing complex genetic information, bridges the gap between computers and biology. Through this technology, we're helping researchers turn genetic information into knowledge that will dramatically accelerate pharmaceutical research and improve the diagnosis, treatment and prevention of disease. And Affymetrix is leading the way, with more powerful versions of this technology on the horizon. Join us as we advance into the Genetics Age.

Staff Scientist

As part of the Product Development group, you will initiate, direct, and implement novel strategies in the development of molecular biology methods and reagents for labeling, amplifying and detecting nucleic acids. Requires a PhD in Biochemistry, Biophysics, Genetics, Molecular Biology or a related field, and a minimum 3 years relevant experience in DNA/RNA and standard molecular biology procedures and concepts. Background in a supervisory role with responsibilities for key deliverables in a new product development process is preferred. Job Code SCI-ATR346

Data Analysis Scientist

You will work on a team dedicated to discovering and utilizing advanced data analysis and visualization techniques to understand microarray data. This will include applying novel data analysis techniques to data sets generated from R&D programs, providing high-level data analysis and bioinformatics support to scientists participating in collaborative research projects, and helping define and create data analysis, visualization and mining tools. The generation of training and presentation material based on novel data analysis techniques will also be performed. Requires a PhD in Computational Biology, Bioinformatics or a related field and a minimum 2 years experience with experimental molecular biology, genetics, or physical biochemistry. Experience analyzing microarray data and knowledge of other genomics techniques is desired. Job Code SCI-ATR939

Take part in this striking intersection of computers and biology. As part of our team, you will enjoy a competitive salary and benefits package, plus a dynamic work environment where you'll have the resources you need to get the job done. For consideration, please mail, fax, or email your resume, indicating Job Code, to: Affymetrix, Human Resources, 3380 Central Expressway, Santa Clara, CA 95051. Fax: (408) 481-0422. Email: Email: HR-proddeveng@affymetrix.com. Visit our website at www.affymetrix.com. We are an equal opportunity employer.

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www.affymetrix.com.

AFFYMETRIX®

Postdoctoral Fellowships
Immune Cell Signaling
Biology and Structure of Pathogens

The Laboratory of Immunogenetics (LIG) in the National Institute of Allergy and Infectious Diseases at the National Institutes of Health is offering Postdoctoral Fellowships for training in the areas of immune cell activation, chemotaxis, and bacterial pathogenesis. The research in the LIG is broadly focused on the molecular and cellular basis of immune cell function and the biology of pathogens, encompassing a wide spectrum of cutting edge technologies including genomics, mouse genetics, combinatorial chemistry, X-ray crystallography, and live cell imaging. The laboratory members are highly interactive creating a unique training environment that melds chemistry, structural biology, molecular biology and cell biology. The research resources and facilities at the NIH and within LIG are excellent, providing outstanding training opportunities. The principal investigators participating in postdoctoral training in the LIG include:

Clifton E. Barry III, Ph.D. (cbarry@nih.gov)
Mycobacterium tuberculosis biology, functional genomics, drug discovery.

Silvia Bolland, Ph.D. (sbolland@nih.gov)
Inhibitory signaling pathways, autoimmunity.

David N. Garboczi, Ph.D. (dgarboczi@nih.gov)
Antigen recognition by T cell receptors, receptors and ligands of the malarial parasite, virus structure.

Tian Jin, Ph.D. (tjin@nih.gov)
Chemotaxis, G-protein coupled receptors.

Eric O. Long, Ph.D. (elong@nih.gov)
Signaling pathways in Natural Killer (NK) cell activation, regulation through NK cell inhibitory receptors.

Susan K. Pierce, Ph.D. (spierce@nih.gov)
Lymphocyte activation, receptor trafficking, and spatial organization of the plasma membrane.

Peter D. Sun, Ph.D. (psun@nih.gov)
Structural immunology, receptors of the innate immune system, immune synapses.

For further information, please contact **Susan K. Pierce, Ph.D., Chief, LIG (spierce@nih.gov), National Institute of Allergy and Infectious Diseases, Twinbrook II, Room 200B, 12441 Parklawn Drive, MSC 8180, Rockville, MD 20852** or visit the NIAID website at **www.niaid.nih.gov**. Salary commensurate with experience.

NIH is an Equal Opportunity Employer.

Niagara
UNIVERSITY

ECOLOGIST - Niagara University, a private Catholic institution sponsored by the Vincentian Community, is seeking a tenure track Assistant Professor in the Department of Biology. Candidates should have a broad training in ecology and expertise in contemporary methodologies with applications to environmental issues. A Ph.D. is required and post-doctoral experience is preferred. A strong record of research accomplishment and the ability to teach undergraduates is expected. Teaching responsibilities include majors' introductory level courses, ecology, botany, and upper level courses in the areas of expertise. The development of an active interdisciplinary research program that involves undergraduates is expected. Salary is commensurate with qualifications.

Applications should include the following: three letters of recommendation; curriculum vitae; reprints of three representative and current publications; statements of teaching philosophy and experiences; a summary of research interests and goals. Review of applications will begin in January 2002 and continue until the position is filled. Submit applications to: **Dr. Robert S. Greene, Chair, Department of Biology, P. O. Box 2032, Niagara University, NY 14109.**

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

Post-Doctoral Positions
Rocky Mountain Laboratories, Hamilton, Montana
Salary Commensurate with Experience/Education

NATIONAL INSTITUTES OF HEALTH. Postdoctoral positions available for motivated individuals in the field of bacterial pathogenesis to study the molecular biology, biochemistry, and epidemiology of *Staphylococcus epidermidis* infections. *S. epidermidis* is a gram-positive opportunistic pathogen and one of the major causes of hospital-acquired infections. A special focus will be on cell-cell communication, host interaction, and the mechanisms involved in biofilm formation. Experiments will be carried out with state-of-the-art equipment, including large DNA sequencing facilities, microarray techniques, microscopic techniques including confocal laser scanning microscopy, animal testing facilities, sophisticated chromatograhic equipment, etc. Robots are available for high-throughput analyses in epidemiological projects.

Please send CV and three letters of reference to:

Michael Otto, Ph. D.
Rocky Mountain Laboratories
Laboratory of Human Bacterial Pathogenesis
NIAID, NIH
903 S 4th Street
Hamilton, MT 59840

Email: motto@niaid.nih.gov

NIH is an Equal Opportunity Employer

FACULTY POSITION

Northwestern University Medical School, Department of Psychiatry and Behavioral Sciences, is seeking to recruit an outstanding full-time faculty member at the tenure-track **ASSISTANT PROFESSOR** level in basic science research related to depressive disorders. The position carries the Dunbar Scholar endowment. Qualifications include a Ph.D., M.D., or equivalent degree; postdoctoral experience; and a strong publication record. Applicants who are applying molecular/genetic approaches to fundamental questions of emotional behavior are particularly encouraged to apply.

The successful candidate will be expected to establish and maintain an extramurally funded research program with international visibility. Please send curriculum vitae, a statement of research interest and long-range goals, and names of three references to: **Eva Redei, Ph.D., Asher Center for the Study and Treatment of Depressive Disorders, Department of Psychiatry and Behavioral Science, Northwestern University, 303 East Chicago Avenue, Ward 9-198, Chicago, IL 60611**. Closing date is February 15, 2002. Starting date is fall 2002. *Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States. Women and minorities are encouraged to apply.* Academic Search #P-140-02.

CLASSIFICATION HEADING
Infectious Disease

Scientific Director: Accel Healthcare Communications seeks a highly qualified individual with an advanced degree in microbiology and good writing skills. The Scientific Director is responsible for the scientific content of medical education materials including monographs, slide kits, and manuscripts. You will work closely with infectious disease specialists and provide leadership for writing teams. Willingness to travel, excellent interpersonal skills, and the ability to integrate scientific/clinical issues with pharmaceutical marketing realities are required. Send your résumé and writing samples confidentially to: **Linda Molina, Accel Healthcare Communications, 30 Irving Place, New York, NY 10003. E-mail: lmo@accelhealth.com**.

Biology Educator: **ASSISTANT/ASSOCIATE PROFESSOR**, tenure track. Primary duties: teaching content course(s) for elementary education majors, introductory biology, and public service through the Middle Tennessee State University Environmental Education Center. Research also expected. The successful applicant will have a strong background in biology and science education with a proven record of successful teaching and funding. Ph.D./Ed.D. required by start date of August 2002. Review of applications begins 15 January 2002. Send application letter referencing position number (103460), proof of employment eligibility, statement of teaching philosophy, copies of transcripts, and three letters of reference to: **Dr. Cindi Smith-Walters, Box 60, MTSU, Murfreesboro, TN 37132. E-mail: csmithwa@mtsu.edu; website: http://www.mtsu.edu**. *An Equal Opportunity/Affirmative Action Employer.*

A&G Pharmaceutical, Inc., an early-stage biotechnology company, has several positions (B.S./M.S./Ph.D. in cell biology, molecular biology, cancer biology, and/or biochemistry) available in our Research and Development division to characterize novel targets involved in human breast tumorigenesis. Experience in the following areas: molecular cloning, protein expression/purification, cell growth assay preferred. Please send curriculum vitae and names of three references to: **Dr. Le Sun, A&G Pharmaceutical, Inc., 600 East Lombard Street, Suite 509, Baltimore, MD 21202. E-mail: lsun@agrx.net; FAX: 410-230-0903; website: http://www.agrx.net**. *Equal Opportunity Employer.*

POSITIONS OPEN

UNIVERSITY OF ST. THOMAS

TENURE-TRACK FACULTY
Biology

The University of St. Thomas, St. Paul, Minnesota, invites applications for two full-time, tenure-track positions at the **ASSISTANT PROFESSOR** level in (1) animal physiology and (2) microbiology. Both positions will begin in fall 2002. Candidates for both positions should be committed to undergraduate education in a liberal arts environment and able to develop a vigorous, potentially fundable research program involving undergraduates. We especially encourage applications from candidates whose interests integrate cellular, organismal, and population-level aspects of their discipline. Teaching responsibilities for both candidates will include contribution to majors and nonmajors introductory courses and both intermediate-level and advanced courses in their areas of expertise.

The University of St. Thomas is a private, Catholic, comprehensive, liberal arts university with an undergraduate student body of about 5,000 students. Additional information about the Biology Department is available on our **website: http://www.stthomas.edu/BIOL**. Send letter of application; curriculum vitae; statements of research interests; a statement of teaching philosophy that includes information on teaching interests; and three letters of recommendation by December 31, 2001, to: **Department of Human Resources, Mail Number AQU217, 2115 Summit Avenue, St. Paul, MN 55105**. *Affirmative Action/Equal Opportunity Employer.*

YOUNGSTOWN STATE UNIVERSITY

Department of Biological Sciences: Tenure-track position available August 19, 2002. Ph.D. in environmental biology, aquatic ecology, or related field; postdoctoral experience desirable. Successful candidate is expected to develop a vigorous research program that involves undergraduate and graduate students, is competitive for extramural funding, and interacts with faculty in the biological sciences and industry or governmental agencies on local ecological issues. Will teach animal diversity, ichthyology, conservation biology, aquatic biology, and graduate courses in candidate's specialty.

Send letter of interest; résumé; brief description of research and teaching interests; official transcript documenting academic credentials; and the names, addresses, and telephone numbers of at least three references by January 2, 2002, to: **Dr. Paul Peterson, Chairperson, Department of Biological Sciences, Youngstown State University, One University Plaza, Youngstown, OH 44555**. For more information, visit the Department **website: http://www.as.ysu.edu/~biology**. *YSU is an Affirmative Action/Equal Opportunity Employer committed to increasing the diversity of its faculty, staff, and students.*

Applicants are invited for a 75% position to begin February 1, 2002, at the University of California Berkeley to carry out analysis of regulation of the hephaestin gene and protein by iron status. In addition, this individual will be responsible for implementation of gene expression analysis techniques. We are recruiting for a **POSTGRADUATE RESEARCHER** (salary range: $31,044 to $46,056 per year) to carry out a variety of molecular biology and biochemistry techniques. Requires a Bachelor's degree in the life sciences with experience in Western blots, cell culture, and RNA isolation. In addition, familiarity with object-oriented database systems is required.

Send curriculum vitae and names of references to: **Dr. Chris Vulpe, Department of Nutritional Sciences and Toxicology, 119 Morgan Hall, University of California, Berkeley, CA 94720-3104. FAX: 510-642-0535; e-mail: vulpe@uclink4.berkeley.edu**. Application deadline is January 12, 2002. *UC is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Department of Botany at the University of Vermont invites applications for a tenure-track faculty appointment in the area of ecology. Applications are welcome from outstanding candidates in any area of plant ecology. Experimental Community Ecologists who are testing fundamental theories in community ecology using field experiments and who have conservation interests are especially encouraged to apply. Faculty appointment is expected to be at the **ASSISTANT PROFESSOR** level. Candidates must have a Ph.D., preferably postdoctoral experience, be able to establish an extramurally funded research program, and teach graduates and undergraduates. To receive full consideration, all materials must be received by January 3, 2002. Applicants should send curriculum vitae, a summary of research and teaching interests, up to three representative publications, and arrange for three letters of reference to be sent to: **Dr. Jane Molofsky, Chair, Ecology Search Committee, Department of Botany, 120b, Marsh Life Sciences Building, University of Vermont, Burlington, VT 05405**. *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

PSYCHIATRIC GENETICS

The Department of Psychiatry at The University of Texas Southwestern Medical Center at Dallas is seeking outstanding Researchers in the area of psychiatric genetics who are focused on human or animal systems. Positions are available at the rank of **ASSISTANT, ASSOCIATE,** or **FULL PROFESSOR** depending on experience. Successful candidates will have an M.D. or M.D./Ph.D. degree. Attractive start-up packages are available. Please submit curriculum vitae, cover letter, and names of three references to:

Dr. Eric J. Nestler
Chairman, Department of Psychiatry
The University of Texas Southwestern
Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, TX 75390-9070

The University of Texas Southwestern Medical Center is an Equal Opportunity Employer.

ASSISTANT PROFESSOR OF BIOLOGY. Tenure-track, nine-month position beginning August 2002. Oxford College (**website: http://www.emory.edu/OXFORD**), a two-year division of Emory University, is located 38 miles east of Atlanta, Georgia. Teaching responsibilities are introductory biology and genetics; additional courses may include zoology or anatomy/physiology. Required: Doctorate in biological sciences; strong commitment to teaching first- and sceond-year students in a liberal arts, residential context. Send curriculum vitae, letter describing teaching experience and teaching philosophy, official transcripts, and contact information for three references to: **Dr. Evelyn Bailey, Chair, Biology Search, Oxford College of Emory University, Oxford, GA 30054**. Applications will begin to be reviewed on December 31, 2001. *Affirmative Action/Equal Opportunity Employer.*

A position is available to investigate elementary steps of the cross-bridge cycle in cardiac muscle strips after removal of the thin filament by gelsolin treatment and reconstitution of the thin filament with purified actin, tropomyosin, and troponin molecules. The work includes protein purification, removal and reconstitution of the thin filament, and computer-controlled mechanochemical experiments to access elementary steps of the cross-bridge cycle. Experiments with mutant proteins are also planned. Interested individuals should send the application letter, curriculum vitae, and names of three references to: **Dr. Masataka Kawai, Department of Anatomy and Cell Biology, University of Iowa, Iowa City, IA 52242 U.S.A. E-mail: masataka-kawai@uiowa.edu**.

Endowed Chair of Cancer Research
Department of Otorhinolaryngology

TENURE-TRACK POSITION
CANCER GENETICIST

Applications are invited for the newly established Presbyterian Health Foundation Chair for Cancer Research in the Department of Otorhinolaryngology. We are seeking an individual at the **ASSISTANT** or **ASSOCIATE** level, with a PhD or MD degree, and who has an established research record in the genetic basis or cell biology of cancer with a preference for tumors of the head and neck.

The successful candidate will be expected to conduct independent research, with national funding, in a collaborative environment that interfaces basic, clinical and translational research, and to participate in graduate, as well as postgraduate, medical education. The position is an exceptional opportunity that includes salary support and generous start-up funds. The academic appointment will be on the tenure-track and commensurate with the candidate's qualifications.

A letter of interest, curriculum vitae (with e-mail address), and the names and addresses of three references should be sent to the Chair of the Search Committee: **Jesus E. Medina, MD, Paul and Ruth Jonas Professor and Chair, Department of Otorhinolaryngology, The University of Oklahoma Health Sciences Center, PO Box 26901, WP1360, Oklahoma City, OK 73190. Telephone: 405-271-5504.**

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

You can look toward the future.

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At Immunex, we're creating innovative biopharmaceuticals that are giving new hope to people suffering from cancer, inflammatory and infectious diseases. These advancements are all a product of our environment.

Based in our downtown Seattle, Washington location, you will enjoy all the benefits of this cutting-edge city. Beautiful scenery from mountains to water, plus all the amenities of urban living are easily within your grasp.

For more information on Immunex, the career opportunities available, about Seattle, Washington, and to apply online, please visit our Web site at: **www.immunex.com/careers.**

Immunex is an equal opportunity employer committed to diversity.

FORTUNE 100 BEST COMPANIES TO WORK FOR 2001

POST-DOCTORAL FELLOWSHIP

The Process Science Department is seeking a Postdoctoral Fellow to join our interdisciplinary team to assist in creating the expression and process technologies of the future!

The ideal candidate will be creative with a strong background in research methodology and problem solving. Research experience in more than one of the listed disciplines is desired. A Ph.D. in Molecular Biology, Cell Biology, Biochemistry, Biochemical Engineering, Pharmaceutical Sciences, or related field is required.

In addition to the tremendously rewarding environment, we offer an exceptional compensation and benefits package. Please submit a scanable resume specifying job code #01-0462 to immunexcareers@webhirerpc.com.

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PENNSTATE
College of Medicine

CHAIR, DEPARTMENT OF PHARMACOLOGY

The Pennsylvania State University College of Medicine located at the Milton S. Hershey Medical Center in Hershey, PA is searching for a Chair of the Department of Pharmacology. The Department has a vibrant faculty with a strong record of peer-reviewed support and an established history of collaborative relationships with other basic science and clinical departments, research centers, and institutes within the College of Medicine, the Milton S. Hershey Medical Center and throughout the University. The selected individual will provide academic, administrative and scholarly leadership for the research and educational missions of the Department. Qualifications include a Ph.D. and/or M.D. degree, a distinguished record of creative scientific accomplishment, and a commitment to graduate and medical education. In addition, the successful applicant must have excellent interpersonal and leadership skills, and the vision and ability to move the Department to the next level of national recognition. Review of applications will begin immediately and continue until the position is filled. Please send nominations or applications (including curriculum vitae and four names of potential references) to the following address.

Lawrence I. Sinoway, M.D.
Chair, Pharmacology Search Committee
Division of Cardiology, MC H047
Pos #: S-12263
Penn State College of Medicine
500 University Drive
Hershey, PA 17033

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

Two Cell Biologists

The Division of Biological Sciences at the University of Missouri–Columbia (www.biology.missouri.edu) invites applications for two new tenure-track positions in cell biology at the assistant professor or associate professor level. We are particularly interested in individuals whose research interests complement those of our current faculty. MU also features strong interdisciplinary programs in Molecular Biology, Genetics and Neuroscience.

The Division offers highly competitive salaries, generous start-up packages, modern research laboratories and support facilities, an active graduate program with institutional support for students and postdoctoral associates and a highly interactive faculty. *We are firmly committed to fostering ethnic and racial diversity in our faculty and our student body, and thus strongly encourage applications from women and members of groups underrepresented in science.*

Send curriculum vitae, reprints, statement of teaching and research interests and three letters of reference to: Dr. John David, Chair, Division of Biological Sciences, University of Missouri, Columbia MO 65211-7400. The review of application materials will begin on **January 1, 2002.**

MU is an Equal Opportunity—Affirmative Action Employer. To request ADA accommodations contact Robin Brueckner at (573) 882-6650 or by e-mail at BrucknerR@missouri.edu.

ASSISTANT PROFESSOR OF MICROBIOLOGY
Miami University

Miami University invites applications for a tenure-track position on its campus in Hamilton, Ohio, for August 2002. The successful applicant will be expected to teach undergraduate courses in medical microbiology for nursing students and epidemiology, establish and maintain an active research program, and participate in university and community service. The specific area of research specialty is open; however, candidates with interests that complement research expertise within the Department or the Hamilton biological science faculty (aquatic/terrestrial ecology) are particularly encouraged to apply. The Hamilton campus is an open admission commuter campus with 2,900 students, located 16 miles from the main campus in Oxford, Ohio. Microbiology faculty on the Hamilton campus are full members of the Department of Microbiology, which is composed of 12 faculty, over 25 Ph.D./M.S. students, and approximately 300 majors. State-of-the-art facilities for molecular and microbiological research are located on the Oxford campus. Start-up funds are available. Send curriculum vitae, statement of teaching and research interests, and arrange for three letters of recommendation to be sent to: **Dr. Robert H. Findlay, Department of Microbiology, Miami University, Oxford, OH 45056**. Review of applications will begin on January 2, 2002, and continue until the position is filled. Ph.D. or equivalent terminal degree required. **Telephone: 513-529-5422; e-mail: rfindlay@miavx1.muohio.edu; websites: http://www.muohio.edu/~MBICWIS/** and **http://www.ham.muohio.edu/** for more information. *Miami University offers Equal Opportunity in Employment and Education.*

TENURE-TRACK POSITION
Cellular Immunology and HIV Disease Pathogenesis

The Department of Pathology and the Center for AIDS Research at The University of Alabama at Birmingham are recruiting for a tenure-track faculty member at the rank of **ASSISTANT** or **ASSOCIATE PROFESSOR** with a primary research interest in cellular immunology and HIV disease pathogenesis. Either M.D. and/or Ph.D. candidates with a demonstrated excellence in research in T cell biology and/or the immunological aspects of HIV disease pathogenesis are encouraged to apply. The successful candidate will be expected to develop an independent, extramurally funded research program focused on either basic or applied aspects of the regulation of T cell-mediated immune responses in experimental animals and/or human disease. Competitive salary and research start-up package are available. Interested candidates should send their curriculum vitae, statement of research interests, and names of three references to:

R. Pat Bucy, M.D., Ph.D.
Professor and Head, Section of Immunocytology
Division of Laboratory Medicine
Department of Pathology
University of Alabama at Birmingham
619 19th Street S. WP/P230
Birmingham, AL 35249-7331

The University of Alabama is an Affirmative Action/Equal Opportunity Employer and especially invites applications from minority and women candidates.

RESEARCH ASSISTANT PROFESSOR

Department seeks a highly motivated Ph.D. to work on transcriptional regulation of MUC1 gene. The candidate must be eligible to apply for independent extramural grants and have a minimum of three years of postdoctoral experience in the related area. Send curriculum vitae, summary of previous research, and three letters of recommendation to **e-mail: kkim@rx.umaryland.edu. Dr. K.C. Kim, University of Maryland, School of Pharmacy, Baltimore, MD.** *An Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR
Environmental Science

Hawaii Pacific University has an opening for a full-time, career-track position in environmental science at the level of **ASSISTANT** or **ASSOCIATE PROFESSOR** beginning August 2002. HPU offers undergraduate programs in biology, environmental science, marine biology, oceanography, and premedical studies. The successful applicant will teach introductory and advanced lecture, laboratory, and field courses required for the B.S. environmental science degree. Additional responsibilities could include a leadership role in the environmental science program and teaching courses in other science majors. Minimum qualifications include a Doctoral degree in environmental science or related field. Desirable qualifications include experience teaching at the undergraduate level, professional experience, and a demonstrated record of research and scholarship.

Qualified applicants should submit their curriculum vitae, evidence of undergraduate teaching experience, statement of teaching philosophy, description of professional development goals, and names and contact information of three references to: **Environmental Science Search, c/o Human Resources, Hawaii Pacific University, 1166 Fort Street, Suite 201, Honolulu, HI 96813. E-mail: hr@hpu.edu; FAX: 808-544-1192; website: http://www.hpu.edu.** Review of applications will begin February 1, 2002. *Equal Opportunity Employer.*

The College of Optometry of the State University of New York seeks to make a tenure-track **APPOINTMENT** in the cellular mechanisms of visual processing at retinal or cortical loci. The College has an ongoing commitment to develop excellence in visual neuroscience. The successful candidate will have opportunities to collaborate with Neurophysiologists, Computational Modelers, Visual Psychophysicists, and clinical faculty. The primary criteria for appointment will be excellence in research and teaching. Applicants must show promise of building an outstanding record of externally funded research. This position will begin at a time to be determined pending budgetary and administrative approval. A Ph.D. is required, and salary and start-up package will be highly competitive. The College is situated in central Manhattan. Interested persons should send curriculum vitae, a statement of research and teaching interests, at least three letters of recommendation, and (p)reprints to: **Dr. John J. Picarelli, Chair, Biological Science Search Committee, 33 West 42nd Street, New York, NY 10036. E-mail: jpicarelli@sunyopt.edu.** *SUNY College of Optometry is an Affirmative Action/Equal Opportunity Employer and encourages application from women and minority groups.*

The Department of Biochemistry and Biophysics and the Program in Human Genetics invite applications for **ASSISTANT ADJUNCT PROFESSOR**. The successful candidate will serve as full-time Lecturer and Director of medical school courses in medical genetics, cell/molecular biology, and human metabolism. Will also contribute to medical curriculum design. Primary scholarly activities will be in the area of medical education. Ph.D. or M.D. or equivalent Doctoral-level degree is required. Expertise in the area of human or medical genetics and teaching experience are highly desirable. To apply, send curriculum vitae, a summary of career goals and teaching experience, and request that three letters of recommendation be sent to: **Professional School Teaching Director, Department of Biochemistry and Biophysics, University of California, San Francisco, Room S964, San Francisco, CA 94143-0448.** All material should be received by February 15, 2002. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

BIOTECHNOLOGY ADVISOR
Regional Africa Agriculture

The U.S. Agency for International Development seeks an Agricultural Biotechnology Advisor for Africa. The Advisor will provide technical assistance to develop agricultural biotech programs, promote biotechnology applications, and help harmonize national biotechnical policies throughout Africa. The Advisor will work in collaboration with USAID missions, governments, and the private sector. *American citizens* with advanced degrees in biotechnology and experience in African agriculture are encouraged to apply. The position will be based in Nairobi, Kenya. Extensive travel throughout the continent will be required. For application procedures and more information, contact: **Patrick Muthee, Acquisition Specialist, USAID/REDSO/ESA/RCO, Nairobi, Kenya; Telephone: +254-2-862400, Extension 2349; FAX: +254-2-860 949/860 861; e-mail: contracts.africa@usaid.gov; website: http://www.usaid.gov/ftp_data/pub/OP/PSC/62302005.html.** Closing date is Friday, December 21, 2001. *U.S. citizenship is required.*

BARNSTABLE BROWN ENDOWED CHAIR IN DIABETES

The Department of Pediatrics at the University of Kentucky invites applicants for the Barnstable Brown Endowed Chair in diabetes research. The successful candidate should have a Ph.D., M.D., or equivalent degree and have an extramurally funded research program that focuses on diabetes. The recipient of the Endowed Chair may also have an appointment in one of the basic science departments within the College of Medicine. A competitive salary and start-up package is available. Please send nominations or an application packet including a letter of interest, curriculum vitae, and three references to: **Louis Hersh, M.D., Department of Biochemistry, University of Kentucky, 800 Rose Street, Lexington, KY 40536-0284. E-mail: lhersh@uky.edu.** The committee will begin reviewing applications on January 3, 2002. *The University of Kentucky is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION
Protease Biochemistry
Harvard Medical School

A Postdoctoral position is available immediately to study the biochemistry of proteases involved in Alzheimer's disease, working between the laboratories of **Michael Wolfe** and **Dennis Selkoe** (see *Science* **293:** 1449, 2001; *PNAS* **98:**11039, 2001). Applicants must demonstrate a strong record of achievement in protein expression, purification, and function. The successful candidates will work well in an interdisciplinary environment ranging from synthetic chemistry to molecular and cell biology. Send curriculum vitae and three letters of recommendation to: **Dr. Michael S. Wolfe, Center for Neurologic Diseases, Brigham and Women's Hospital, 77 Avenue Louis Pasteur, Boston, MA 02115. E-mail: mwolfe@rics.bwh.harvard.edu.**

RESEARCH SCIENTIST wanted for New Haven, Connecticut, Genomics Biotechnology company. Conduct genetic research on disease-causing interacting proteins and pathways. Develop mRNA expression analysis and SNP protein detection approaches. Perform high-throughput analysis using DNA microarrays. Perform experimental design and data analysis. Requirements: Ph.D., degree in biochemistry, biological science, or closely related. Please forward résumé to: **Otieno Ombok, Human Resources Department, CuraGen Corporation, 555 Long Wharf Drive, 13th Floor, New Haven, CT 06511. E-mail: careers@curagen.com.**

University of Arkansas at Little Rock
Two Tenure-track Positions
Applied Biosciences Graduate Program

The University of Arkansas at Little Rock (UALR) invites applications for two tenure-track faculty positions in the Applied Biosciences Graduate Program within the Department of Applied Science. We are looking for energetic scientists to contribute to the Interdisciplinary Molecular Biology and Bioinformatics Group as part of the rapidly expanding research community at UALR and at the University of Arkansas for Medical Sciences (UAMS). The University of Arkansas at Little Rock, one of eleven campuses in the University of Arkansas System, is located in the geographic, economic, political, and social center of the State. UALR is a comprehensive, public, metropolitan university with an enrollment exceeding 11,000 students and over 500 faculty members in six colleges, a law school, and the Graduate School.

Tenure-track faculty are being sought in the fields of:

Bioinformatics - Applicants should have a strong background and understanding of the tools required for innovative approaches to computational biology. Programming database design and experience are desired. The successful candidate will have the opportunity to serve as the Director of the Statewide Arkansas Bioinformatics Core Group that is being established within the University of Arkansas System as the result of a recently funded NIH-Biomedical Research Infrastructure Network (BRIN) Grant.

Genomics-Proteomics - Applicants should have developed, or demonstrate a strong potential for developing, a research program in the molecular analysis of plants, animals, or microorganisms. Scientists interested in interdisciplinary approaches to biological problems using the tools of genomic-proteomic and bioinformatic analyses are encouraged to apply. The successful candidate will have the opportunity to interact with a broad range of scientists at UALR and UAMS.

Candidates should hold an earned Ph.D. in biology, genetics, biochemistry, molecular biology, information science, or related fields. Pre-Doctoral candidates will be considered as well, with the stipulation that their degree will be completed before employment commences. Preference will be given to those candidates having post-Doctoral experience in genomics, proteomics, or bioinformatics. Successful candidates are expected to develop a nationally recognized research program, mentor MS and PhD students, and develop appropriate courses for the Doctoral Program.

Applicants should send a curriculum vita, a publication list, a statement of research interests, and teaching philosophy, and three references with contact information to: **Dr. Roger Hawk, Chair, Department of Applied Science, University of Arkansas at Little Rock, 2801 S. University Ave., ETAS 575, Little Rock, AR 72204-1099, Tel. (501) 569-8010, Fax (501) 569-8020, E-mail: rmhawk@ualr.edu.** Review of applications will begin January 5, 2002 and continue until the positions are filled.

The University is an Affirmative Action/Equal Opportunity Employer. Under Arkansas law, all applicants are subject to disclosure. Persons hired must have proof of legal authority to work in the United States.

Postdoctoral Positions

MOUNT SINAI SCHOOL OF MEDICINE

Several senior postdoctoral positions in molecular biophysics are available immediately. We are seeking candidates who are interested in: 1) Investigation of the structural dynamics of protein-DNA interactions. 2) Investigation of the structure-function relationships of transmembrane proteins, including G protein-coupled receptors, involved in signaling. The research combines theory at various levels, including Monte Carlo and molecular dynamics simulations, molecular modeling and quantum chemical calculations of ground and excited states. Candidates will have access to excellent computational facilities, based on a multiprocessor parallel SGI computer. Applicants should have a strong background in Theoretical Biophysics and/or Biophysical Chemistry.

Send CV and names of three references to: Dr. Roman Osman, Department of Physiology and Biophysics, Box 1218, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029. E-mail: osman@inka.mssm.edu. More details can be found at http://fulcrum.physbio.mssm.edu/~osmanlab/ EOE.

POSTDOCTORAL RESEARCH FELLOWS CARDIOVASCULAR RESEARCH

University of Nebraska Medical Center

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, 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. email: izucker@unmc.edu**

The University of Nebraska Medical Center is an Equal Opportunity Employer.

YOU MUST BE AN AMERICAN CITIZEN OR PERMANENT RESIDENT TO APPLY.

mayo

POSTDOCTORAL POSITIONS
Division of Experimental Pathology
Rochester, Minnesota, U.S.A.

Postdoctoral research positions supported by the National Institutes of Health are available for highly motivated individuals interested in: (1) functional studies of the BRCA2 gene using domain-specific mutations; (2) characterization of novel oncogenes involved in breast cancer development and progression. *In vitro* molecular assays and animal models will be used for both studies.

Salary will be determined by the successful candidate's experience. There is an attractive benefit package. Mayo Clinic Rochester is a not-for-profit organization. Mayo integrates research with clinical practice and education in a multi-campus environment.

Applicants should have a Ph.D. with experience in molecular cell biology or biochemistry and should send a curriculum vitae, a description of research accomplishments, and names of three references to:

Fergus J. Couch, Ph.D.
Mayo Clinic
200 First Street SW
Rochester, MN 55905 USA
e-mail: couch.fergus@mayo.edu

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

Whitehead Institute

Assistant Director for Research Management – Medical and Population Genetics
Center for Genome Research

Works with the Genome Center Director and Program Director of the Medical and Population Genetics (MPG) Program to help define and communicate the scientific vision of the MPG Program, and to identify research interests and major objectives. Acts as a liaison with outside collaborators to initiate new joint scientific endeavors. Helps to manage the research projects of the MPG Program. Supports efforts to raise funds for important scientific projects, and facilitates scientific collaborations with researchers outside of the center. Ph.D. in biology or a related field highly preferred. In addition, 5-8 years of relevant experience in a research or administrative setting is necessary.

We offer competitive salaries and excellent benefits. Please fax resumes to:

617-258-0903, or
e-mail to: resumes@genome.wi.mit.edu.

For more information about the Whitehead Institute, including additional job postings, please visit:

www.whitehead.mit.edu.

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TECHNOLOGY ENTREPRENEURS
Bioinformaticists
Clinical Genetic Medicine Experts

Are you intrigued with the challenge and excitement of a growing bioinformatics business? PointOne is an emerging clinical-genetic bioinformatics company developing an innovative platform for personalized medicine. We thrive on collaborative relationships with leaders in pharmaceuticals, health care, and biotechnology. We are an entrepreneurial start-up founded on a culture of creativity, enthusiasm, and can-do attitude. Our work environment is dynamic, demanding, family friendly, and fun. You will enjoy intense, challenging team interaction with top professionals in the industry. We are a fast-growing, Milwaukee-based company.

CHIEF TECHNOLOGY OFFICER. The qualified applicant is a seasoned entrepreneur with extensive depth and breadth in IS technology. Past success spearheading product development from the initial concept to commercial implementation is required. Solid business acumen and a proven track record leading development teams in technology start-ups are a must.

DIRECTOR OF BIOINFORMATICS. Ph.D. expertise in bioinformatics, computer science, molecular biology or related field is needed to support product implementation and sales. Influential communication skills and collaborative project management skills required.

DIRECTOR OF CLINICAL GENETIC MEDICINE. M.D./Ph.D. expertise in genetics or molecular biology needed to facilitate strategic partnerships and oversee service delivery in the clinical health care environment. Excellent relationship-building skills required.

Join PointOne and help create a new future for personalized medicine! Strong candidates demonstrate a zest for achieving in a competitive environment. Professionals with experience in pharmaceuticals or health care are preferred. Please e-mail or FAX your résumé by December 14, 2001, to **e-mail: jphillips@humbermm.com; Telephone: 414-271-6220; FAX: 414-271-4995.**

RESEARCH POSITIONS
Host-Plant Pathogen Interactions
NSF-Funded Program

Positions are available at all levels to work as part of a multiinstitutional team on a National Science Foundation Plant Genome Program-funded project to investigate host-pathogen interactions. This work will focus on using genomic and high-throughput techniques to elucidate the molecular events involved in recognition, pathogenesis, and resistance for the rice blast pathosystem. Rice blast (caused by the fungus *Magnaporthe grisea*) is the most devastating disease of rice and is a major threat to rice production worldwide. This unique project will evaluate both the host and pathogen to dissect the early events determining disease outcome. Research will include microarray construction and analysis, high-throughput mutant production and phenotype analysis, gene rescue, construction and analysis of SAGE and cDNA libraries, gene silencing and targeted gene knockouts, EST and genomic DNA sequence analysis, and the construction of a comprehensive database. Wet laboratory Researchers as well as Bioinformaticians are needed. Postdoctoral, graduate student, and technician positions are available at North Carolina State University, University of Kentucky, University of Arizona, Texas A&M University, Clemson University, Purdue University, and Ohio State University. Qualified applicants will have a degree in plant pathology, biology, genetics, computer science, or related field. For more information on positions available at each collaborating institution and how to apply, visit **website: http://www.riceblast.org/**. Questions should be directed to: **Dr. Thomas Mitchell; NCSU Fungal Genomics Laboratory; e-mail: thomas_mitchell@ncsu.edu**. *North Carolina State University is an Equal Opportunity/Affirmative Action Employer. Individuals with disabilities desiring accommodations in the application process should contact Shane Yocum at Telephone: 919-513-0022.*

POSITIONS OPEN

BIOCHEMISTRY AND CHEMINFORMATICS FACULTY POSITION

The University of Massachusetts Lowell invites applications for one tenure-track faculty at the **ASSISTANT ASSOCIATE** or **FULL PROFESSOR** rank in the Department of Chemistry to start September 2002. Area of research may include physical biochemistry instrumental or theoretical approaches to structure determination or intermolecular interactions related to biochemical problems in genomics, proteomics, or drug-macromolecule interactions. A solid background in and active utilization of information technology is required. The candidate will develop an active, high-quality funded research program and will participate in the biochemistry Ph.D. program option within the Department. Active participation in developing an integrated (four science departments) curriculum in bioinformatics and cheminformatics at UML is expected. Teaching will be at both the undergraduate and graduate levels. Review of applications will begin January 15, 2002, and will continue until the position is filled. This position is contingent upon funding. The candidate should send detailed curriculum vitae, a two-page description of research plans with estimated start-up costs, a description of teaching ideas related to developing curriculum for bioinformatics/cheminformatics courses, and three letters of reference to: **Professor Kenneth A. Marx, Department of Chemistry, University of Massachusetts Lowell, One University Avenue, Lowell, MA 01854**. *The University of Massachusetts Lowell is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH OPPORTUNITIES
Committee on Immunology
University of Chicago

The training program in immunology at the University of Chicago has openings for Postdoctoral Fellows supported by an NIH training grant. Research projects are available with many immunology faculty and cover a diverse array of molecular and cellular approaches to important immunological problems including antigen presentation; lymphocyte development and repertoire; lymphocyte signaling, differentiation, homeostasis, and apoptosis; tolerance and autoimmunity; asthma; NK cells and innate immunity; and tumor immunology. Additional details are available at **website: http://immunology.uchicago.edu**. *Applicants must be U.S. citizens or permanent residents* and should submit their curriculum vitae, a brief description of their research experience and interests, and the names of three references to: **Dr. Jim Miller, Chair COI, University of Chicago, 920 East 58th Street, Chicago, IL 60637**. *The University of Chicago is an Affirmative Action/Equal Opportunities Employer.*

POSTDOCTORAL POSITION

COR Therapeutics is proud to announce a new program to provide training in basic biomedical research within the setting of active, innovative biotechnology and drug discovery programs. We are seeking highly motivated candidates with interest in platelet biology and cardiovascular disease. We presently have an opening in the area of platelet ADP receptors (see *Nature* **409**:202–207, 2001; *J. Clin. Invest.* **108**:477–483, 2001) and/or the characterization of novel platelet genes identified from expression-profiling approaches.

The successful candidate will possess a Ph.D. or M.D. along with training in molecular biology, biochemistry, or cell signaling; an excellent publication record; superior written/verbal communication skills; and the ability to work well in a team environment.

Please send résumé referencing Job Number B079-SCI to: **COR Therapeutics, Inc., Attention: Human Resources, 256 Grand Avenue, South San Francisco, CA 94080. FAX: 650-615-9639; e-mail: hr@corr.com**. *Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR SEARCH EXTENDED
Department of Pharmacology
University of Nevada School of Medicine, Reno

Applications are invited for tenure-track positions at the Assistant Professor level. Outstanding candidates for higher rank at the **ASSOCIATE PROFESSOR** level will also be considered. Applicants must have a Ph.D. or equivalent degree and evidence of research productivity and creativity. Applicants are sought with demonstrated research expertise including but not limited to molecular and cellular biology, genomics, transgenesis and gene targeting, cytoskeletal signal transduction mechanisms, proteomics, and bioinformatics. The successful candidate will be expected to participate in graduate and medical student teaching and to develop a strong, independent research program. He or she will join an interactive faculty with research interests in molecular biology of ion channels, biochemistry, biophysics and molecular biology of skeletal muscle cells, cellular and molecular aspects of neuropharmacology, vascular wall cell biology, cell physiology, molecular biology, electrophysiology, and contraction of cardiac and smooth muscle cells (**website: http://www.unr.edu/med/dept/Pharmacology/id1.htm**). Opportunities exist for a variety of collaborative interactions including possible adjunct appointment in the interdisciplinary Center of Biomedical Research Excellence. Competitive salaries, start-up, and state-of-the-art instrumentation and facilities are available. Send curriculum vitae, a statement of future research plans, and the names of three references to: **J. R. Hume, Ph.D., Department of Pharmacology/318, University of Nevada School of Medicine, Reno, NV 89557**. Review of applications will begin January 15, 2002. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR PATHOGEN MICROBIOLOGY

The Department of Biological Sciences at Northern Arizona University invites applications for a tenure-track position in pathogen microbiology. We seek an individual who will develop an active, independent research program (the area of research should be in the broadly defined field of medical microbiology); develop and keep current a senior-level undergraduate lecture and laboratory course in medical microbiology; contribute to the undergraduate microbiology curriculum in general; and mentor undergraduate student researchers in their laboratory. At the graduate level, this individual will offer a course in the area of their specialty or choice. Qualifications include a Ph.D. (or any equivalent Doctoral-level degree) in microbiology (or related field) with at least one year of postdoctoral training. Please submit curriculum vitae; description of research interests; a statement of teaching philosophy; a statement that describes your commitment to (and/or evidence of) working effectively with a diverse student, faculty, and staff population; and three letters of recommendation to: **Microbiology Search Committee, Department of Biological Sciences, South Beaver at Franklin, Northern Arizona University, P.O. Box 5640, Flagstaff, AZ 86011-5640**. Position is open until filled. Review of applications will begin January 7, 2002. *Northern Arizona University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, persons with disabilities, and veterans are especially encouraged to apply.*

Immediate opening for a **POSTDOCTORAL POSITION**. The candidate must have strong background in molecular biology and nucleic acids biochemistry. Experience in protein purification and/or tissue culture will be a plus. Send curriculum vitae, research accomplishments, and three reference letters to: **S. Basu, Ph.D., 650A Salk Hall, Center for Pharmacogenetics, 3501 Terrace Street, University of Pittsburgh, Pittsburgh, PA 15213. FAX: 412-648-1664; e-mail: basu+@pitt.edu**.

Marine Biological Laboratory

2002 Course Offerings

Substantial financial assistance is available for many of our courses!

Advances in Genome Technology & Bioinformatics
October 6 - November 1

Analytical & Quantitative Light Microscopy
May 9 - May 17

Biology of Parasitism: Modern Approaches
June 13 - August 10

Embryology: Concepts & Techniques in Modern Developmental Biology
June 16 - July 27

Frontiers in Reproduction: Molecular & Cellular Concepts & Applications
May 19 - June 29

Fundamental Issues in Vision Research
August 11 - August 24

Medical Informatics
1st Session: May 26 - June 2
2nd Session: September 29 - October 6

Methods in Computational Neuroscience
August 4 - September 1

Microbial Diversity
June 16 - August 2

Microinjection Techniques in Cell Biology
May 21 - May 28

Molecular Biology of Aging
July 30 - August 17

Molecular Mycology: Current Approaches to Fungal Pathogenesis
August 12 - August 30

Neural Development & Genetics of Zebrafish
August 18 - August 31

Neural Systems & Behavior
June 16 - August 10

Neurobiology
June 16 - August 17

Neuroinformatics
August 17 - September 1

Optical Microscopy & Imaging in the Biomedical Sciences
October 9 - October 18

Physiology: The Biochemical & Molecular Basis of Cell Signaling
June 16 - July 27

Rapid Electrochemical Measurements in Biological Systems
May 9 - May 13

Summer Program in Neuroscience, Ethics, & Survival (SPINES)
June 15 - July 13

Workshop on Molecular Evolution
July 28 - August 9

For more information contact:
Carol Hamel, Admissions Coordinator
(508) 289-7401
admissions@mbl.edu
http://courses.mbl.edu

The MBL is an EEO/Affirmative Action Institute

Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543-1015

CURATORIAL POSITION
INVERTEBRATE PALEONTOLOGY
Carnegie Museum of Natural History

Applications from Ph.D.-level **INVERTEBRATE PALEONTOLOGISTS** are invited for a Curatorial position (rank open). The Museum seeks an individual demonstrating excellence in collection-based research addressing major conceptual issues in systematics, evolution, biogeography, or paleoecology. Desirable qualifications include external research funding and experience in curation and public programs. The collection consists of more than 500,000 specimens with strengths in the Upper Paleozoic and in brachiopods, gastropods, and trilobites. Send curriculum vitae; up to five reprints; a statement of professional goals; and three letters of reference to: **John R. Wible, Dean of Science, Carnegie Museum of Natural History, 4400 Forbes Avenue, Pittsburgh, PA 15213** by January 31, 2002.

TENURE-TRACK ASSISTANT PROFESSORSHIP available in Department of Microbiology and Immunology, Medical College of Virginia Campus, Virginia Commonwealth University (VCU). Position at Assistant Professor level or higher is available in the Department of Microbiology and Immunology at VCU. Original advertisement was posted the week of September 11, 2001, and listed a deadline of November 30, 2001, for consideration. We are extending the deadline per this revised announcement. Applicant must hold Ph.D. degree or equivalent and have at least two years of postdoctoral experience. Candidates must have formal training and expertise in cellular and/or molecular immunology. The successful applicant is expected to establish a strong, grant-supported, independent research program and to contribute to departmental teaching responsibilities. Applicants with expertise in any immunological subspecialty are encouraged to apply but preference will be given to those who complement existing research strengths in immediate type hypersensitivity, B cell biology, etc. For additional information, see **website: http://views.vcu.edu/micro/**. Send statement of research interests; curriculum vitae; and arrange submission of at least three letters of reference by January 15, 2002, to: **Dr. John G. Tew** and **Search Committee, Microbiology and Immunology, Box 980678, Richmond, VA 23298-0678. E-mail: tew@hsc.vcu.edu**. *VCU is a culturally diverse, Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities are encouraged to apply.*

ASSISTANT/ASSOCIATE PROFESSOR, CONSERVATION BIOLOGIST: Applications are invited for a nine-month, tenure-track faculty position. Summer salary is dependent upon availability of teaching and research funds. We seek an individual with expertise in conservation biology to promote interdisciplinary research and provide services to governmental and nongovernmental natural resource agencies and to teach courses in his or her area of expertise (two undergraduate, one graduate). Research experience could be from an array of conservation biology fields. Applicants should possess a Ph.D. in conservation biology, wildlife ecology, or closely related field; strong quantitative skills; ability to generate extramural funding; and a demonstrated ability to publish in area of expertise. Salary will be commensurate with qualifications and experience. Review of applicants will begin on 1 March 2002 and continue until a suitable applicant is found. Send letter of interest, curriculum vitae, representative publications, transcripts, and three letters of reference to: **Dr. Loren M. Smith, Faculty Search Committee, Department of Range, Wildlife, and Fisheries Management, Texas Tech University, Lubbock, TX 79409-2125. E-mail: lmsmith@ttu.edu.** *Texas Tech University is an Equal Employment Opportunity/Affirmative Action Institution.*

POSITIONS OPEN

TWO TENURE-TRACK BIOLOGY FACULTY POSITIONS
Microbiologist, Developmental Biologist

Biology Department of Indiana University Southeast seeks qualified Ph.D.s for two tenure-track, **ASSISTANT PROFESSOR** positions to begin fall 2002. (1) Microbiologist with specialization in environmental microbiology or microbial ecology and (2) Animal Developmental Biologist. Postdoctoral experience using modern strategies is a prerequisite for both positions. Candidates will have option to teach nine hours with release time for active research or 12 contact hours per semester. Microbiologist will provide instruction in undergraduate microbiology courses, environmental microbiology, and general biology. Developmental Biologist will teach developmental biology and general biology and upper-level courses. Ability to teach an upper-level undergraduate immunology course desirable. Successful candidates expected to pursue a research program with undergraduate students and compete for extramural funding. Candidates required to demonstrate the potential for excellence in teaching at undergraduate level. Research space and start-up funds provided. Submit curriculum vitae; statement of interest including teaching philosophy and professional goals; three recent publications; unofficial copies of transcripts; and names, telephone numbers, and addresses (including e-mail) of three references by December 22, 2001, to: **Human Resources, c/o Dr. David W.Taylor, IU Southeast, 4201 Grant Line Road, New Albany, IN 47150**. For more information, visit **website: http://ius.edu/Biology/homepage.stm**. *IU Southeast is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR
Department of Pathology and Laboratory Medicine
University of Pennsylvania

The Department of Pathology and Laboratory Medicine, University of Pennsylvania, invites applications for a faculty position at the rank of Assistant Professor in the tenure track available July 1, 2002. A background in genetics of aging and basic cell biology is highly desirable. Candidates must possess an M.D., M.D./Ph.D., or Ph.D. Preference will be given to candidates with research experience in studies of aging and the potential to develop an independent research program in this area. Applicants should submit curriculum vitae; a description of current and future research plans; and the names of three references by January 31, 2002, to: **Dr. Virginia M.-Y. Lee, c/o Gayle Viale, Hospital of the University of Pennsylvania, Department of Pathology and Laboratory Medicine, Center for Neurodegenerative Disease Research, 3 Maloney, 3600 Spruce Street, Philadelphia, PA 19104-4283. E-mail: viale@mail.med.upenn.edu**. *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer. Women and minorities are strongly encouraged to apply.*

UNIVERSITY OF TEXAS
The M. D. Anderson Cancer Center

Two **POSITIONS** are available in the Department of Cancer Biology to study the functions of androgen receptor in prostate cancer. A Ph.D. with a strong background in molecular biology and biochemistry is preferred for one position, and experience with transgenic mice is highly desirable for the other position. The M.D. Anderson Cancer Center is a leading cancer care facility with an active research and education foundation offering a unique opportunity for collaborative clinical and basic research efforts. Send cover letter, three references, and curriculum vitae to: **Dr. Zhengxin Wang, Department of Cancer Biology 173, 1515 Holcombe Boulevard, Houston, TX 77030. E-mail: zwang@mdanderson.org; FAX: 713-792-8747**. *MDACC is an Equal Opportunity Employer; women and minority candidates are encouraged to apply.*

POSITIONS OPEN

ars Agricultural Research Service — United States Department of Agriculture

The Agricultural Research Service, Plant Sciences Institute, Bee Research Laboratory, in Beltsville, Maryland, is seeking an interdisciplinary **MICROBIOLOGIST/MOLECULAR BIOLOGIST/ENTOMOLOGIST**, GS–12/13, with promotion potential. Salary is commensurate with experience (GS–12 starting salary: $53,156; GS–13: $63,211) plus benefits. *Candidates must be U.S. citizens.* Incumbent will plan and conduct research on the epidemiology and control of bacterial and viral diseases of honey bees. Objectives are to (1) characterize bacterial strains of foulbrood and determine factors related to pathogenicity, (2) investigate the pathogenicity of honey bee viruses and their mode of transmission as a means of estimating economic importance and (3) examine the immunological responses of honey bees to microbial pathogens. Although the successful applicant will be working with honey bees, previous bee experience is not required. For research information, contact: **Dr. Mark F. Feldlaufer; Telephone: 301-504-8637**. Candidates must request a copy of Vacancy Announcement ARS–X2E–2071 by either calling **Telephone: 301-504-1482**; or **website: http://www.ars.usda.gov** in order to address specific information outlined in the Vacancy Announcement. Applications must be postmarked by January 7, 2002. *USDA/ARS is an Equal Opportunity Provider and Employer.*

FACULTY POSITION in anatomy and physiology. The Department of Biology, Middle Tennessee State University, invites applications for a tenure-track position, **ASSISTANT/ASSOCIATE PROFESSOR**, starting August 2002. Responsibilities include teaching human anatomy and physiology and developing a research program that involves undergraduate and graduate students. The successful candidate must have a strong background in anatomy and physiology and demonstrate a strong commitment to and potential for teaching. Ph.D. required by August 1, 2002. Applicants with grantsmanship and postdoctoral research experience are preferred. Applicant reviews begins 15 January 2002. Send letter of application referencing position number (103030), proof of employment eligibility, copies of transcripts, teaching philosophy, research interests, and three letters of reference to: **Dr. William Stewart, Search Committee Chair, Box 60, MTSU, Murfreesboro, TN 37132-0001. E-mail: wstewart@mtsu.edu; website: http://www.mtsu.edu**. *An Equal Opportunity/Affirmative Action Employer.*

OCEANOGRAPHER
Ocean Monitoring and Prediction

The Naval Research Laboratory at Stennis Space Center, Mississippi, is seeking an Oceanographer with the ability to derive adjoint equations of both analytic models and numerical finite difference ocean environment models using different vertical coordinate system representations. The applicant must possess strong knowledge and experience in working with assimilation techniques. Interested candidates should view Vacancy Announcement DM-NRL-01-0943-NR at **website: http://amp.nrl.navy.mil/code1800** or **Telephone: 215-408-5621** for more information. Announcement opens November 19, 2001, and closes December 18, 2001. Applications must be postmarked by the closing date. *The Naval Research Laboratory is an Equal Opportunity Employer.*

Positions are available to study novel genes involved in controlling DNA damage and/or mitotic checkpoints. Candidates must have a Ph.D. or M.D. degree. Expertise in molecular biology, cell biology, or tumor biology is highly desirable. Competitive salary is commensurate with experience. Send curriculum vitae and two references to: **Wei Dai, Ph.D., New York Medical College, Department of Medicine, 4 Skyline Drive, Hawthorne, NY 10532. E-mail: wei_dai@nymc.edu**.

FELLOWSHIPS

UNCF • MERCK SCIENCE INITIATIVE

"A mind is a terrible thing to waste"

MERCK

UNDERGRADUATE
SCIENCE RESEARCH
SCHOLARSHIP AWARDS

- **15 Awards Annually**
- **Scholarships up to $25,000**
- **Two Summer Internships at a Merck Research Facility**

An applicant must:
- Be a full-time student at any four-year college or university
- Have junior year academic status
- Major in a life or physical science (first professional degrees excluded)
- Have a minimum cumulative GPA of 3.3 (4.0 point scale)

GRADUATE
SCIENCE RESEARCH
DISSERTATION FELLOWSHIPS

- **12 Fellowships Annually**
- **Fellowship Stipends up to $30,000**
- **Department Grants of $10,000**
- **Support for 12-24 months**

An applicant must:
- Be enrolled full-time in a Ph.D. or equivalent doctoral program in a biomedical life or physical science
- Be engaged in and within 1-3 years of completing dissertation research

POSTDOCTORAL
SCIENCE RESEARCH
FELLOWSHIPS

- **10 Fellowships Annually**
- **Fellowship Stipends up to $55,000**
- **Department Grants of $15,000**
- **Support for 12-24 months**

An applicant must:
- Hold a Ph.D. or equivalent degree in a biomedical life or physical science
- Be appointed as a postdoctoral fellow by the end of the year 2002 at an academic or non-academic research institution (private industrial laboratories are excluded)

Applicants must be African American (Black, non-Hispanic), U.S. citizens or permanent residents, and attend an institution in the U.S.A. Applications must be postmarked by December 15, 2001

For application forms and more information, please contact your department chairperson or Jerry L. Bryant, Ph.D., at the **United Negro College Fund**, 8260 Willow Oaks Corporate Drive, P.O. Box 10444, Fairfax, VA 22031-4511, by fax (703) 205-3574, by e-mail at ***uncfmerck@uncf.org***, or visit our website at ***www.uncf.org/merck/***

2002 SUMMER RESEARCH FELLOWSHIPS

FUNDING AVAILABLE FOR SUMMER RESEARCH AT THE MARINE BIOLOGICAL LABORATORY

The Marine Biological Laboratory is pleased to announce the availability of funding for Summer Research Fellowships in 2002 for junior or senior investigators holding a Ph.D., M.D., or equivalent degree. These prestigious awards provide costs for research and housing, and also enable Fellows to benefit from the rich intellectual and interactive environment of the scientific community at the MBL.

Proposals for Fellowship support will be considered in, but are not limited to, the following fields of investigation:

Cellular & Molecular Physiology
Neurobiology
Parasitology
Molcular Biology
Developmental Biology
Ecology
Microbiology

In addition, specific Fellowships also provide state-of-the-art microscopy support.

APPLICATION DEADLINE FOR FELLOWSHIPS IS JANUARY 15, 2002

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

FOR APPLICATION FORMS AND ADDITIONAL INFORMATION, PLEASE CONTACT:
Sandra Kaufmann
Fellowship Coordinator
508-289-7441; skaufman@mbl.edu

The MBL is an EEO/Affirmative Action Institution

Applications are encouraged from women and members of underrepresented minorities.

ADDITIONAL INFORMATION IS AVAILABLE ON OUR WEB-SITE:
http://www.mbl.edu/fellowships

Marine Biological Laboratory, 7 MBL Street, Woods Hole, Massachusetts 02543-1015

THE MOLECULAR SCIENCES INSTITUTE

The Molecular Sciences Institute is a nonprofit basic scientific research institute. The Institute is working to create a predictive biology based on knowledge of the complete inventory of biological parts and how those parts work together to create system outcomes. In accomplishing these goals, the Institute will significantly advance understanding of how living systems function and evolve, will effect positive impacts on human health and agriculture, and will hasten the rise of a design-based biological engineering. For more about us, visit our **website: http://www.molsci.org**.

The Institute is located in Berkeley, California, one block from the University of California Berkeley campus. The environment is small, informed, and lively, puncuated with collaborations among Biologists, Computer Scientists, Physicists, Mathematicians, and Engineers. We are looking for special people to add to our unique team. We currently have the following positions available:

RESEARCH FELLOWS

Description: The Institute has created a new Center that combines functional genomic and computational research. A major project initiated at this Center is aimed at modeling the pheromone signal transduction pathway in yeast. Positions are available to be a part of the functional genomics team. Areas of emphasis include using or improving existing or newly developed reporter molecules to probe individual pathway components; developing novel techniques to make other kinds of quantitative measurements (e.g., peptide aptames, microarray, phage display, mass spectroscopy, etc.); developing novel selection techniques for specific pathway components, etc. Exceptional candidates pursuing innovative research in the development and application of new technologies are encouraged to apply.

There is also a position available at the Institute to investigate genomic rearrangements in adapting populations of yeast. This pilot project is aimed at identifying how populations of cells adapt to changes in environmental conditions. Exceptional candidates with experience using molecular biology and genetics are encouraged to apply.

Requirements: Ph.D. in biology, molecular/micro/cell/structural/biology, or genetics. Exceptional recent graduates as well as more experienced Postdoctoral Fellows with proven track records are encouraged to apply. Must be able to manage independent research as well as collaborate and work effectively with other members of the Institute. Excellent interpersonal and oral and written communications skills are essential.

To join our team, send your curriculum vitae, cover letter including research interests, and letters of reference to:

Human Resources
The Molecular Sciences Institute
2168 Shattuck Avenue, Second Floor
Berkeley, CA 94704
FAX: 510-647-0699
E-mail: recruitment@molsci.org

Applications without cover letter and letters of reference will not be considered. We offer a competitive salary package and benefits.

The Molecular Sciences Institute is an Equal Opportunity Employer.

DIRECTOR, WATER QUALITY LABORATORY

Heidelberg College is reopening its search for a new Director of the Water Quality Laboratory (WQL). The WQL's mission is to help protect the aquatic resources of Ohio, the Midwest, and the Great Lakes by assessing impacts of agricultural and other land uses. Applicants must possess a Ph.D. and five years of experience in an appropriate discipline.

Heidelberg College, a private liberal arts institution in northwestern Ohio, has an established reputation for academic excellence. The full position announcement is available at **website: http://www.heidelberg.edu/wql**.

POSITIONS OPEN

NATIONAL TAIWAN UNIVERSITY HOSPITAL
Medical Research Center

Several positions for **RESEARCH SCIENTISTS** (tenure track) and **POSTDOCTORAL FELLOWS**. National Taiwan University Hospital at Taipei is seeking outstanding Scientists to join the well-funded ($100 million N.T./year) Medical Research Center with excellent facilities to study the following fields: cellular biology, developmental biology, molecular biology, molecular genetics, immunology, and neurobiology. Those with experience in stem cell research are strongly encouraged to apply. Please submit your curriculum vitae, statement of research interests, and three letters of recommendation to: **Professor Hsu, S. M., Department of Medical Research, National Taiwan University Hospital, 7 Chung-Shan South Road, Taipei, Taiwan**. Materials may be submitted electronically to **e-mail: lucc@ha.mc.ntu.edu.tw**. Review of applications will commence immediately and continues until positions are filled.

Applicants are invited for an informative position to begin February 1, 2002, at the University of California Berkeley to work with an LBNL/UCB team in developing gene expression analysis methodologies to identify and monitor potentially harmful environmental agents and to characterize their putative mechanisms of action. We are developing a variety of machine learning techniques in order to develop highly sensitive and informative biosensors and markers for toxicity. We are recruiting for a **SENIOR SPECIALIST** (salary range: $58,236 to $89,160 per year) to develop novel and apply existing analytical methods to gene expression and other data generated from cells, tissues, and organisms exposed to environmental agents. Requires an advanced degree in either the computational or life sciences with experience in statistical analyses. Must be proficient in a UNIX environment and have the ability to program in C/C++, Matlab, and basic shell scripts. Knowledge of SQL and PERL a plus.

Send curriculum vitae and names of references to: **Dr. Chris Vulpe, Department of Nutritional Sciences and Toxicology, 119 Morgan Hall, University of California, Berkeley, CA 94720-3104. FAX: 510-642-0535; e-mail: vulpe@uclink4.berkeley.edu**. Application deadline is January 12, 2002. *UC is an Equal Opportunity/Affirmative Action Employer.*

NETWORK/SYSTEMS ADMINISTRATION

Advance the science of computing at the School of Computational Science and Information Technology at Florida State University. Seeking **NETWORK ADMINISTRATOR** to support research efforts. This role manages our Cisco LAN, leads network projects, and mentors team members. CCNA desired. Also seeking UNIX **SYSTEMS ADMINISTRATOR**. Send curriculum vitae and three letters of recommendation to: **Gary Eggebraaten, CSIT, FSU, Tallahassee, FL 32306-4120. E-mail: geggebra@csit.fsu.edu**. *Florida State University is an Equal Opportunity/Affirmative Action Employer. Your application for Employment with FSU is subject to public disclosure under the Florida Public Records Act.*

The Burke Medical Research Institute invites applications for a position as **RESEARCH ASSISTANT II**. All fields of molecular biology will be considered but you will be expert in mammalian cell culture and DNA transfection. A cover letter, résumé, and names of three references should be sent to: **Dr. Michael Caudy, Burke Medical Research Institute, 785 Mamaroneck Avenue, White Plains, NY 10605. Telephone: 914-597-2289; FAX: 914-597-2757.**

POSITIONS OPEN

IMMUNOLOGIST

The Department of Veterinary Pathobiology at Purdue University invites applications for a tenure-track position as **ASSISTANT PROFESSOR** of immunology. Responsibilities include conducting research and teaching of immunology to medical and graduate students. The candidate is expected to develop a strong, extramurally funded research program in the immunology of cancer. Candidates with expertise in proteomics and research interest in cancer vaccines, dendritic cells, and animal models of cancer are especially encouraged to apply. The Department of Veterinary Pathobiology has expertise in the areas of immunology, bacteriology, parasitology, virology, epidemiology, and pathology. In addition, Purdue University has a highly interactive and interdisciplinary NCI-designated Cancer Center that includes faculty with expertise in cell signaling, drug design, structural biology, molecular pharmacology, imaging, and gene therapy. Excellent research facilities are available in the Department and on campus. Candidates must have a Ph.D. or equivalent degree and relevant postdoctoral training. Salary will be commensurate with training and experience.

Interested individuals should submit a research plan (two to three pages), curriculum vitae, and letters from three references to:

Immunologist Search Committee
c/o Dr. Suresh K. Mittal
Department of Veterinary Pathobiology
Purdue University
West Lafayette, IN 47907-1243
E-mail: skmittal@vet.purdue.edu

Review of candidates will begin on January 1, 2002, and will continue until the position is filled. *Purdue University is an Affirmative Action/Equal Opportunity Employer. Women and minority applicants are especially encouraged to apply.*

POSTDOCTORAL RESEARCH ASSOCIATE position available at our Musculoskeletal Disease Center (MDC) for work on identification of candidate genes involved in peak bone density and bone formation response to mechanical forces. The MDC is a large, multidisciplinary laboratory on the cutting edge of medical research. Our Scientists use state-of-the-art equipment in the collaborative environment of our Molecular Genetics and Gene Therapy laboratories. This position requires a Ph.D. in molecular biology or molecular genetics. Experience in mouse genetics and linkage analysis essential. Good publication record and strong writing skills are an advantage. Salary and benefits are competitive with the possibility of a long-term position. Send curriculum vitae with cover letter, salary requirements, and names/e-mail address of three references to: **Carol Farrell, Loma Linda Veterans Association for Research and Education, P.O. Box 11238, San Bernardino, CA 92423-1238. E-mail: cfarrell@llvare.org**. *Equal Employment Opportunity/Affirmative Action Employer.*

Science education: The Division of Educational Studies of Emory University seeks to fill a tenure-track position at the **ASSISTANT PROFESSOR** level in science education to begin fall 2002. Doctorate required either in science education with a strong academic background in a science field or in one of the sciences with a strong background and interest in science education. Review of applications begins January 15, 2002. See **website: http://www.emory.edu/EDUCATION/** for information and application procedures. *Emory University is an Affirmative Action/Equal Employment Opportunity Employer.*

POSTDOCTORAL POSITIONS available immediately to study transcriptional regulation or signaling of MUC1. Visit **website: http://www.pharmacy.umaryland.edu**. Strong background and training in cell/MB required. Prospective candidates should send résumé, summary of previous research, and names of three references to **e-mail: kkim@rx.umaryland.edu. Dr. K. C. Kim, University of Maryland School of Pharmacy, Baltimore, MD 21201**. *Equal Opportunity Employer.*

UIC The University of Illinois at Chicago

VICE HEAD FOR RESEARCH

The Department of Neurology and Rehabilitation of the College of Medicine of the University of Illinois at Chicago seeks a candidate to fill a position as Vice Head for Research. The Vice Head for Research will have overall responsibility for leading the Department's research program, setting its course and direction, and participating in the recruitment of new investigators. The successful candidate should have demonstrated research experience in the neurosciences, a doctoral degree (Ph.D. or M.D.), and a desire to assume a leadership position. The University of Illinois is committed to expanding its research in the neurosciences including the construction of 9.4 T human research MR facility. Appointment will be in the tenure track. The Vice Head for Research will have a joint appointment in an appropriate basic science department.

RESEARCH NEUROSCIENTIST

The Department of Neurology and Rehabilitation of the College of Medicine of the University of Illinois at Chicago seeks a candidate to fill a position as a research scientist. Appointment will be in the tenure track at the appropriate academic rank depending upon experience and accomplishments. The successful candidate should have demonstrated research experience in the neurosciences, a doctoral degree (Ph.D. or M.D.), and a desire to carry on a funded program of research related to the neurosciences or rehabilitation. The University of Illinois is committed to expanding its research in the neurosciences including the construction of 9.4 T human research MR facility. Other areas of interest include neuroinformatics, neural networks, cerebral reorganization, cognitive neurosciences, brain imaging, rehabilitation engineering, neural prostheses, or neurological or rehabilitation outcome research. The successful applicant will have a joint appointment in an appropriate basic science department.

Review of applicants begins immediately and interviews will continue until position is filled. Anticipated starting date is flexible. For fullest consideration, please respond by March 1, 2002. Send cover letter, vitae, and three letters of reference to: **Daniel B. Hier, M.D., Head, Department of Neurology and Rehabilitation, 912 S. Wood Street, Chicago, IL 60612. Email *neuro@uic.edu*. Telephone 312-996-1757.**

UIC is an AA/EOE employer.

NATIONAL INSTITUTES OF HEALTH
Undergraduate Scholarship Program

Science-Research Scholarship Available

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

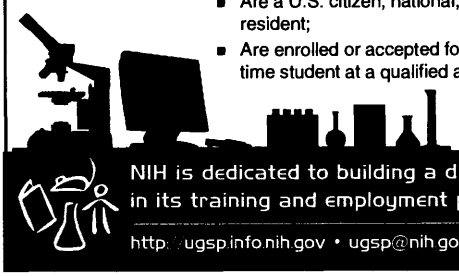
Scholarships of up to $20,000 per year support tuition, educational, and qualified living expenses (room, board, transportation) while students pursue an undergraduate degree.

For each award year, scholars work 10 weeks with salary/benefits in our research laboratories in Bethesda, Maryland. They are assigned mentors, participate in developmental and science enrichment seminars, and are provided with housing and transportation. After graduation, scholars participate in year-long paid research fellowships for each year of their award.

THIS IS A SPECIAL OPPORTUNITY FOR SPECIAL STUDENTS!

Advise students to apply if they:

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



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

http: ugsp.info.nih.gov • ugsp@nih.gov • 1-800-528-7689

FACULTY POSITIONS
DEPARTMENT OF BIOENGINEERING
UNIVERSITY OF CALIFORNIA, SAN DIEGO

The Department of Bioengineering of the University of California, San Diego invites applications for TENURED OR TENURE TRACK FACULTY POSITIONS from individuals with expertise in **Systems Biology/Bioengineering, Bioinformatics or Computational Biology**. Several appointments are anticipated. Successful applicants will be expected to establish vigorous programs of high-quality research in such areas as systems biology/bioengineering and post-genome bioinformatics to complement existing research activities in the Department. The successful candidates will also be responsible for developing and teaching bioinformatics and systems biology/bioengineering courses at the undergraduate and graduate levels. The Department enjoys a close collaboration with the Schools of Medicine and Biology and the Graduate Program in Bioinformatics. Salary is commensurate with qualifications based upon UC pay schedules.

Please send a complete CV, samples of publications, statement of research interest and the names of five references to: **Ms. Lore Meanley, Department of Bioengineering, University of California San Diego, La Jolla, CA 92093-0412.** Consideration of applicants will begin on December 21, 2001 and continue until the positions are filled.

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

POSTDOCTORAL POSITION IN GENE REGULATION

Postdoctoral positions are immediately available to study molecular mechanisms of gene regulation using the human globin locus as a model. This study involves various facets of gene regulation, such as chromatin structure, the function of long distance enhancers and trans factor regulatory networks.

Techniques such as chromatin immunoprecipitation, DNA microarrays, mass spectroscopy along with other *in vivo* and *in vitro* assays are utilized.

Please send CV, brief statement of research interest and names of three references to:

Dr. George Stamatoyannopoulos
Medical Genetics
University of Washington
Box 357720
Seattle, WA 98195-7720
e-mail: gstam@u.washington.edu

IMMUNOLOGIST

The La Jolla Institute for Allergy and Immunology (LIAI) is seeking an outstanding scientist to join its faculty. LIAI is a non-profit research institute dedicated to understanding fundamental aspects of the immune system. Active research programs of the faculty include autoimmunity, infectious and allergic diseases, tumor immunology, cell death regulation, cytokines, signal transduction and antigen recognition. The faculty plans an expansion into new areas including human immunobiology and the biology of hemopoietic stem cells. We seek a highly motivated research scientist to join the faculty who has demonstrated abilities to conduct an independent research program and desires a collaborative environment. Appointment at the assistant to full member level will be considered. Please send CV, research program, and references to:

Faculty Search Committee
LIAI, 10355 Science Center Drive
San Diego, CA 92121
www.liai.org

LIAI is an Equal Opportunity Employer; women and underrepresented groups are especially encouraged to apply.

POSITIONS OPEN

IMMUNOLOGIST. Responsibilities include teaching or coteaching an introductory biology course and an upper-level immunology course with laboratory

PHYSIOLOGIST. Responsibilities include teaching or coteaching an introductory biology course and an upper-level human/mammalian physiology course with laboratory.

NEUROBIOLOGIST. Responsibilities include teaching or coteaching an introductory biology course and an upper-level neurobiology course with laboratory.

All three positions also require maintaining a research program that involves undergraduates. Send statements of teaching and research interests (including descriptions of possible courses), curriculum vitae, copies of publications, list of any relevant courses taught, transcripts, and three letters of recommendation to: **Search Committee, Department of Biological Sciences, Mount Holyoke College, South Hadley, MA 01075-6418. E-mail: biology@mtholyoke.edu**. Applications received by January 11, 2002, are assured full consideration.

Mount Holyoke is an undergraduate, liberal arts college for women with 2,000 students and 200 faculty. It is located about 80 miles west of Boston in the Connecticut River valley and is a member of the Five College Consortium consisting of Amherst, Hampshire, Mount Holyoke, and Smith Colleges and the University of Massachusetts. *Mount Holyoke is committed to fostering multicultural diversity and awareness in its faculty, staff, and student body and is an Affirmative Action/Equal Opportunity Employer. Women and people of color are especially encouraged to apply.*

NEUROSCIENCE RESEARCH POSITIONS

The Parkinson's Institute is an internationally recognized, nonprofit research organization aimed at finding the cause of and cure for Parkinson's disease and other movement disorders. The Institute is expanding and positions are currently available at the **ASSISTANT/ASSOCIATE PROFESSOR** level. Applicants must have a Ph.D. and/or M.D. degree with two to three years of postdoctoral experience. Qualified applicants are expected to develop a solid, independently funded research program with emphasis on genetic and molecular aspects of neurodegenerative processes. Positions will include competitive salary and benefits; start-up packages; and access to the Institute's core facilities (e.g., tissue culture, histology, and patient's tissue bank). Applicants should submit curriculum vitae, a statement of research interest and plans, and the names and telephone numbers of three references to: **Dr. Donato A. Di Monte, Director of Basic Research, The Parkinson's Institute, 1170 Morse Avenue, Sunnyvale, CA 94089 U.S.A. E-mail: ddimonte@parkinsonsinstitute.org.** For further in formation on the Institute, please visit **website: http://www.parkinsonsinstitute.org**.

POSTDOCTORAL/RESEARCH ASSOCIATE positions are immediately available to study ion channels activated by oxidant stress in vascular endothelial cells and their role in cell death. These positions require a Ph.D. and documented expertise using voltage/patch clamp techniques. Electronically submit your curriculum vitae, description of current research, and names of three references to: **Dr. William P. Schilling, Department of Physiology and Biophysics, Case Western Reserve University; e-mail: wps@po.cwru.edu**.

POSTDOCTORAL POSITION to study innate immune responses to intestinal bacteria. M.D. or Ph.D. with experience in molecular biology/immunology. NIH training grant. *Position open to American citizens or permanent residents.* Contact: **Bobby Cherayil, M.D., Pediatric Gastroenterology Unit, Massachusetts General Hospital, 116 14th Street (1143503), Charlestown, MA 02129. Telephone: 617-726-4166; FAX: 617-726-4172; e-mail: cherayil@helix.mgh.harvard.edu**.

POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available immediately to study the role of Ras-related Rab proteins in regulating the trafficking of signaling proteins involved in G protein-coupled receptor signaling events and the dysfunctional trafficking events in cardiovascular pathophysiologies. Studies include transgenic mouse models and myocyte and vascular smooth muscle cell cultures. Successful applicants will be immersed in an interactive environment with *in vivo* and *in vitro* molecular expertise. Interested candidates should have a Ph.D. in a field such as molecular pharmacology, biochemistry, or cell biology. Previous experience in tissue culture, cell biology, and signal transduction is preferred. Please send curriculum vitae and names of three references to: **G. Wu, Ph.D., Department of Pharmacology and Experimental Therapeutics, Louisiana State University Health Sciences Center, 1901 Perdido Street, New Orleans, LA 70112. E-mail: gwu@lsuhsc.edu**. *LSUHSC is an Affirmative Action/Equal Employment Opportunity Employer.*

POSTDOCTORAL POSITIONS (NIH-funded) available immediately to study mitochondrial basis of neurodegeneration in Friedreich's ataxia (as in *Human Molecular Genetics* **10**:2099–2107, 2001, and references therein) and in mitochondrial genetic disease. Experience in mitochondrial measurements (oxygen consumption, membrane potential, mitochondrial enzyme activities) and molecular techniques (microarray, antisense, transfection, RTPCR, Western); English proficiency; and previous experience with neuronal culture preferred. Ph.D. in biochemistry, molecular biology, or genetics required. Salary: approximately $33,000 to $40,000 per year (commensurate with experience) plus benefits. Send curriculum vitae and names of three references to: **G. A. Cortopassi, V.M., Molecular Biosciences, University of California, 1 Shields Avenue, Davis, CA 95616. E-mail: gacortopassi@ucdavis.edu; FAX: 530-754-9342; website: http://cortopassilab.ucdavis.edu**. *University of California Davis is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION for at least two years available beginning on March 1, 2002, to explore the combined treatment strategy of Ph1 + acute lymphoblastic leukemia with thyrosine kinase inhibitor and DNA vaccines in a syngeneic mouse model. The project involves the study and application of DNA vaccines targeting BCR-ABL specific antigens, the evaluation of antigen-specific immune responses *in vivo*, and quantitative PCR of leukemia kinetics. Candidate must have a Ph.D. degree with an excellent background in molecular biology and should be familiar with animal and cell culture techniques. Experience in T cell immunology is a plus. Please send your curriculum vitae to: **Professor Dr. med. D. Niethammer, University of Tübingen, Childrens Hospital, Hoppe-Seyler-Str. 1, D-72076 Tübingen, Germany. Telephone: +49-07071-2984735; e-mail: dietrich.niethammer@med.uni-tuebingen.de**. *Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS are immediately available for research focused on the biological and biochemical functions of tumor suppressor genes and DNA repair machinery. Our recent publications: BRCA2 and RAD51, *PNAS* **95**:5287–5292; BRCA1 and RAD50, *Science* **285**:747–750; and BRCA1 and ZBRK1, *Molecular Cell* **6**:757–768. Training and experience in biochemistry, molecular biology, cell biology, or animal models preferred. Prospective candidates should forward their curriculum vitae and three references to:

Dr. Wen-Hwa Lee, Professor/Chair
Institute of Biotechnology/
Department of Molecular Medicine
15355 Lambda Drive
San Antonio, TX 78245-3207
E-mail: leew@uthscsa.edu

The University of Texas Health Science Center at San Antonio is an Equal Employment Opportunity/Affirmative Action Employer.

POSITIONS OPEN

RESEARCH SCIENTIST
Molecular Genetics

Research Scientist position available in the Molecular Genetics Division of our Musculoskeletal Disease Center (MDC) for work on cDNA microarray studies, *in vitro* functional studies for testing candidate genes, and *in vivo* mouse QTL studies to identify candidate genes that are relevant to the musculoskeletal system. The focus of this work is gene function. Candidates must have a Ph.D. in molecular biology/genetics with experience in statistics, linkage or association studies, and state-of-the-art molecular biology techniques to identify candidate genes and evaluate their functions. A demonstrated record of research publications in molecular genetics is essential. Most of our Research Scientists are appointed to faculty positions at Loma Linda University, one of our affiliated educational institutions. Send curriculum vitae with cover letter, salary reqirements, and names/e-mail addresses of three references to: **Carol Farrell, Loma Linda Veterans Association for Research and Education (LLVARE), P.O. Box 11238, San Bernardino, CA 92423-1238. E-mail: cfarrell@llvare.org**. *Equal Employment Opportunity/Affirmative Action Employer.*

The U.S. Department of Agriculture, Animal, and Plant Health Inspection Service, Plant Protection and Quarantine, Riverdale, Maryland, is seeking four full-time **BIOTECHNOLOGISTS** with scientific expertise in at least one of the following areas: plant molecular biology, entomology, weed science, turfgrass biology, forestry or fruit tree biology, plant breeding, ecology, or population genetics. The position is a Biotechnologist, GS–0401–12/13. Appropriate qualifying education and experience is required (see Vacancy Announcement). Salary range is $53,156 to $82,180. The Biotechnology Program is responsible for authorizing field testing of engineered organisms and is part of the federal government's review authorizing the commercial use of engineered plants and microorganisms. Represents the program when participating in professional societies, committees, and meetings. Prepares a variety of environmental documents, reports, technical analyses, and position papers on different aspects of biotechnology. For more information, **e-mail: james.l.white@aphis.usda.gov.** Please refer to the Vacancy Announcement 9-77-055-2 (status applicants) and 24-77-142 (nonstatus applicants) for specific requirements and application procedures. To obtain a copy of the Vacancy Announcement, you may visit **website: http://www.aphis.usda.gov/mb/mrphr/jobs/vacancy.html**. *Must be U.S. citizen.*

POSTDOCTORAL POSITION
RNA Biochemistry and Molecular Biology

Postdoctoral position available immediately for structural, functional, and genetic studies of protein synthesis and protein tagging (transtranslation). Experience in biochemistry and molecular biology of nucleic acid-protein and protein-protein interactions is preferred. Prior work with ribosomes is desirable. See our **website: http://www.ag.auburn.edu/users/jwower**. Send curriculum vitae and names of three references to: **Dr. Jacek Wower, Animal and Dairy Sciences, Auburn University, Auburn, AL 36849. Telephone: 334-844-1508; FAX: 334-844-1519; e-mail: jwower@acesag.auburn.edu**. Review of applications will begin immediately and will continue until a qualified applicant is selected. *Auburn University is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.*

POSTDOCTORAL POSITIONS
Duke University

Professor M. C. Pirrung seeks recent Ph.D.s for research in nucleic acid synthesis and biochemistry (see **website: http://www.chem.duke.edu/~pirrung**). Send curriculum vitae, publication list, and references (with contact information) to: **Box 90317, Durham, NC 27708. FAX: 919-660-1591**.

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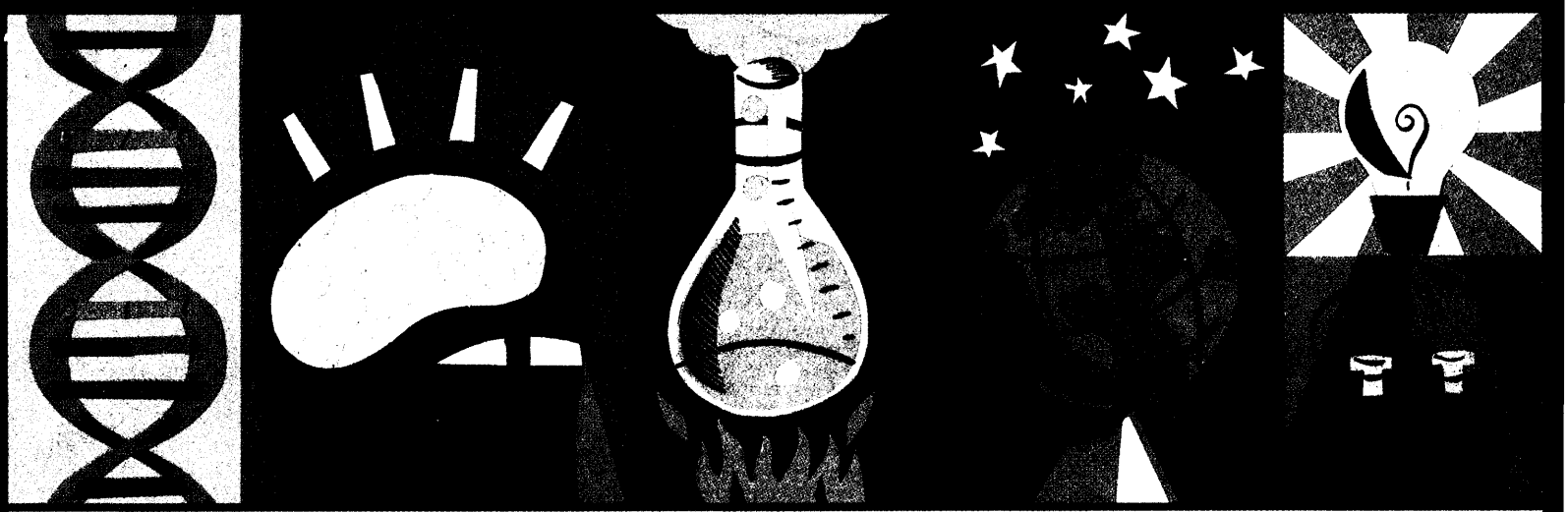

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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE

The Department of Physiology and Biophysics at the University of Nebraska Medical Center is seeking applications for a Postdoctoral Research Associate. Candidates would be expected to participate in ongoing NIH-funded research projects in the area of electrophysiology to study the cellular and molecular mechanisms of electrical remodeling in the failing heart. The research projects in our laboratory focus on the cellular impact of oxidative stress on alterations in myocyte potassium channel function in diabetic and postinfarction models of heart failure. We are seeking candidates with experience in patch clamp, molecular biology, or biochemical techniques that are applicable to fundamental studies of cardiac ion channel regulation. Applicants should send curriculum vitae, a statement of research interests and career goals, and the names of three references to: **Dr. George J. Rozanski, Department of Physiology and Biophysics, University of Nebraska Medical Center, 984575 Nebraska Medical Center, Omaha, NE 68198-4575. E-mail: grozansk@unmc.edu.** *The University of Nebraska Medical Center is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH
Chromatin and Transcription

Genetic and biochemical approaches are used to study histone modifications including acetylation and phosphorylation during gene activation in *S. cerevisiae* and in herpes simplex virus (HSV). HSV is a DNA virus which forms latent infections in the nervous system from which it reactivates. Control of gene expression during the various stages of infection (lytic, latent, and reactivation) is being examined. Current studies also include the role of acetylation of p53 in p53-mediated gene activation. Recent publications include **Barlev et al.**, *Molecular Cell*, December 2001; **Lo et al.**, *Science* **293:**1142, 2001; **Tsavachidou et al.**, *J. Virology* **75:**9909:64, 2001. Contact: **Shelley L. Berger, The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104. E-mail: berger@wistar.upenn.edu** or **Nigel W. Fraser, University of Pennsylvania Medical Center, 319 Johnson Pavilion, 3601 Hamilton Walk, Philadelphia, PA 19104. E-mail: nfraser@mail.med.upenn.edu.**

POSTDOCTORAL POSITIONS are available to study regulation of the dopamine transporter by endocytic trafficking in expression model systems and neurons. Research will focus on the mechanisms of protein-protein interactions involved in these processes and will utilize diverse methodology including FRET microscopy and proteomics. Candidates with training in neuroscience or molecular and cell biology are welcome. Salary is competitive. Please send curriculum vitae and the names of references to: **Drs. Alexander Sorkin** or **Nancy Zahniser, Department of Pharmacology, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262. E-mail: alexander.sorkin@uchsc.edu.** *University of Colorado Health Sciences Center is committed to Equal Employment Opportunity/Affirmative Action.*

POSTDOCTORAL POSITIONS

Positions are open for qualified individuals to investigate morphological, functional, and genetic basis of gonadal and nongonadal phenotype in LH receptor knockout mice. We are looking for highly motivated individuals with experience or exposure to contemporary cell and molecular biology techniques including functional genomics, proteomics, conditional knockouts using Cre-Lox technique, and gene therapy using viral vectors. If interested, contact: **Dr. C. V. Rao, Department of Obstetrics, Gynecology, and Women's Health, 438 MDR Building, University of Louisville Health Sciences Center, Louisville, KY 40292. E-mail: cvrao001@gwise.louisville.edu.**

POSITIONS OPEN

POSTDOCTORAL SCIENTIST POSITION: peptide chemistry/peptide science structure and mechanism-based IL5 receptor antagonists. This position is available immediately to work on structure-based and mechanism-based design of interleukin 5 mimetic antagonists. We are interested in someone with expertise in peptide chemistry/peptide science to identify structure-based antagonists of interleukin 5 through miniprotein/peptide design and to use mimetics to evaluate IL5 receptor recruitment mechanisms at the molecular/structural level. Experience in combinatorial synthesis, computer-based molecular modeling, or recombinant phage display would be a plus. Candidates should hold a recently obtained Ph.D. in chemistry, biochemistry, or a related discipline. Send résumés and names/telephone numbers/FAX numbers/e-mail addresses for three references to: **Irwin Chaiken, Ph.D., Professor of Medicine and Faculty Director of Protein Interactions Core, University of Pennsylvania School of Medicine, 909 Stellar Chance Laboratories, 422 Curie Drive, Philadelphia, PA 19104-6100. Telephone: 215-573-9678; FAX: 215-349-5572; e-mail: chaiken@mail.med.upenn.edu; website: http://www.med.upenn.edu/imcgroup/.**

POSTDOCTORAL RESEARCH POSITIONS

Artificial enzyme group seeks candidates interested in participating in cutting-edge, multidisciplinary projects. Organic Chemist: synthesis of combinatorial libraries and transition-state analogs. Biochemist: synthesis, derivatization, characterization, and purification of modified oligonucleotides and proteins. Molecular/Cell Biologist: functional selection and mechanistic characterization of biomolecules from libraries. Salary is commensurate with expense.

Please send résumé and names of references to: **Dr. Donald W. Landry, Columbia University, Medicine, Box 84, 630 West 168th Street, New York, NY 10032. E-mail: mns18@columbia.edu.** *Columbia University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Seeking a qualified Postdoctoral applicant to study the molecular basis of integral membrane protein pathways to the nuclear envelope and to intranuclear membranes during viral infection. Candidate will utilize techniques to isolate and study the identity of proteins interacting in complexes. Position could start immediately or within the next six to nine months. Salary negotiable commensurate with experience and starting at $40,000 annually. Please send résumé and names of three references to: **Dr. Max D. Summers, Minnie Belle Heep Building, Room 324, Texas A&M University, College Station, TX 77843-2475.** *Texas A&M University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available to study the CCA-adding enzyme [ATP(CTP): tRNA nucleotidyltransferase], the only polymerase that can build a defined nucleic acid sequence without using a nucleic acid template (*EMBO J.* **17:**3197–3206, 1998; *Science* **294:**1334–1336, 2001). Crystallographic studies are also underway. Send curriculum vitae and names of three references to: **Dr. Alan Weiner, Department of Biochemistry, HSB J417, University of Washington, Box 357350, Seattle, WA 98195-7350. FAX: 206-685-9231; e-mail: amweiner@u.washington.edu.**

POSTDOCTORAL POSITIONS available for recent Ph.D. recipients. Strong background in molecular and cellular biology or protein chemistry is essential. See our current research information at **website: http://repromed.ucsd.edu/faculty/rmshim.html.** Send curriculum vitae to: **Shunichi Shimasaki, Ph.D., Department of Reproductive Medicine, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0633. E-mail: sshimasaki@ucsd.edu.**

POSITIONS OPEN

POSTDOCTORAL POSITION
Gene Regulation and Development

An NIH grant-funded position is available immediately to identify and characterize novel transactivators of human fetal γ-globin gene expression using specialized cell lines and transgenic mice. Other potential projects include verification of existing fetal globin activator proteins and development of assays for screening chemical inducers of γ-globin. Candidates should have a Ph.D. in molecular biology or related field or an M.D. Experience with basic molecular biology techniques is essential; training in cell culture methods, transgenic mice procedures, or yeast biology is desirable. Salary for this position is commensurate with experience. Please send curriculum vitae, brief summary of reserch experience and career goals, and names of three references to:

Kenneth R. Peterson, Ph.D.
Department of Biochemistry and Molecular Biology
University of Kansas Medical Center
3901 Rainbow Boulevard
Kansas City, KS 66160
E-mail: kpeterson@kumc.edu

POSTDOCTORAL POSITION
Stem Cell Research and Tissue Engineering

The University of California Los Angeles Department of Urology is seeking a Postdoctoral Fellow to study adult-derived stem cells, smooth muscle differentiation, and stem cell-derived biomaterials for urological application. The position requires a Ph.D. in molecular biology, cell biology, biomedical engineering, or a related field. Candidates should have a strong background in molecular biology and cell culture techniques. A surgically minded person with an interest in the application of stem cell research and tissue engineering to animal models and urologic disease processes is strongly preferred. The candidate will work in the laboratories of **Dr. Larissa V. Rodríguez** and **Dr. Marc Hedrick.**

Please send curriculum vitae and names of three references to:

Larissa V. Rodríguez, M.D.
University of California Los Angeles
924 Westwood Boulevard, Suite 520
Los Angeles, CA 90024
E-mail: lrodriguez@mednet.ucla.edu

POSTDOCTORAL POSITIONS
Available in 2002

Postdoctoral positions are available for research on aging and age-related diseases including cancer and cardiovascular disease at the Lankenau Institute for Medical Research in suburban Philadelphia, Pennsylvania. For descriptions of research groups of individual Investigators, please refer to **website: http://www.mainlinehealth.org/limr** and search under Faculty and Staff Directory. Send résumé and names of three references directly to one of the specific Investigators or to: **Janet Sawicki, Ph.D., Chairman, Postdoctoral Training Committee, Lankenau Institute for Medical Research, 100 Lancaster Avenue, Wynnewood, PA 19096 U.S.A.** *Equal Employment Opportunity.*

POSTDOCTORAL POSITIONS are available at Harvard Medical School, Department of Ophthalmology. Research addresses fundamental problems in the function, structure, and development of the eye and the mechanisms of eye diseases through the application of tools of classical/molecular genetics, cell biology, biochemistry, and electrophysiology in a variety of model systems ranging from *Drosophila* to the mouse. Current openings are available in the laboratories of **Drs. Applebury, Arshavsky, Li, Makino, Malicki, Pignoni,** and **Wiggs.** Send applications by e-mail or FAX to address listed at **website: http://www.howelaboratory.harvard.edu.** *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION
Yale School of Medicine

A Postdoctoral position is available immediately and open until filled in a laboratory that works on oncogenic retroviruses. We are interested in viral entry and uncoating and trafficking (see also **website: http://info.med.yale.edu/micropath/fac_mothes.html**). Our cell biological approach to viral replication benefits greatly from Yale's strong membrane biology and interdisciplinary atmosphere. Candidates should be familiar with standard molecular biology methods and have experiences in either microbiology, cell biology, or biochemistry. Candidates should e-mail their curriculum vitae and contact information for three references to: **Walther Mothes, Ph.D., Yale School of Medicine, Boyer Center, Section of Microbial Pathogenesis, 295 Congress Avenue, New Haven, CT 06536-0812. E-mail: walther.mothes@yale.edu**. *Yale University is an Equal Opportunity/Affirmative Action Employer. Qualified women and members of underrepresented minority groups are encouraged to apply.*

POSTDOCTORAL AND RESEARCH ASSISTANT POSITIONS

A Postdoctoral position plus positions for M.S. and Ph.D. students are available for a project to isolate candidate genes influencing honey bee behavioral traits and to evaluate these genes. Candidates for the Postdoctoral position should be experienced in bioinformatic analyses and have laboratory skills involving DNA and RNA analysis. The research will involve physical mapping of bacterial artificial chromosomes and sequence analyses followed by assays of gene expression. Analyses of behavioral data and fine-scale genetic mapping may also be involved. The postdoctoral appointment will be from two to four years, and salary will be commensurate with experience. The Research Assistantships are available for study of behavioral genetics and molecular biology of honey bees or more applied apicultural research. Candidates for any of these positions should send curriculum vitae and statement of interest plus the names, e-mail addresses, and telephone numbers of three references to: **Greg J. Hunt, Department of Entomology, Purdue University, West Lafayette, IN 47907-1158. Telephone: 765-494-4605; FAX: 765-494-0535; e-mail: ghunt@purdue.edu**. *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION
Cancer Biology

A Postdoctoral position is available immediately to study the function of a tumor suppressor serpin, maspin. Research areas include identifying the molecular mechanism of tumor suppression by maspin and studying maspin function *in vivo* utilizing inducible maspin transgenic and knockout mice. For more information, please visit **website: http://www.bcm.tmc.edu/mcb/faculty/zhang.html**. Applicants must have a Ph.D. in biology. Expertise in cancer biology or molecular biology is highly desirable. Send curriculum vitae and names of three references to: **Dr. Ming Zhang, Baylor College of Medicine, Department of Molecular and Cellular Biology, Houston, TX 77030. E-mail: mzhang@bcm.tmc.edu.**

CAREER IN OPTOMETRY, OPTOMETRIC RESEARCH, OR TEACHING

The New England College of Optometry offers a unique program for those with a Doctorate in the sciences: biology, chemistry, physics, psychology, etc. Candidates have the opportunity to obtain the Doctor of Optometry (O.D.) degree in 27 months. The program begins annually in June. Employment opportunities exist in clinical practice, industry, optometric faculty positions, and research. Contact: **Admissions Office, Department S, 424 Beacon Street, Boston, MA 02115. Telephone: 1-800-824-5526; e-mail: admissio@ne-optometry.edu; website: http://www.ne-optometry.edu**. Application deadline: March 1, 2002.

POSITIONS OPEN

POSTDOCTORAL POSITION
Department of Neuroscience
The University of Pennsylvania

A Postdoctoral position is available to study the role of astrocytes in regulating synaptic transmission and plasticity. The study will investigate synaptic transmission using the hippocampal slice preparation and will be focused on determining the consequences of astrocytic calcium elevations on synaptic transmission. Applicants should be experienced in whole cell patch clamp recordings to moniter synaptic transmissions in brain slice preparations. The successful candidate will study in an interdisciplinary environment and will have opportunities to use confocal microscopy and photolysis as well as electrophysiological approaches. The laboratory is in the Department of Neuroscience at the University of Pennsylvania (**website: http://www.med.upenn.edu/nscience**), providing a rich opportunity for collaborative activities.

Candidates should submit electronically a letter of application, curriculum vitae, and the names and contact information of two references to: **Dr. P. G. Haydon; e-mail: pghaydon@mail.med.upenn.edu.**

POSTDOCTORAL POSITIONS
Donald Danforth Plant Science Center

Postdoctoral positions are anticipated in a variety of scientific disciplines including biochemistry, computational and structural biology, cell biology, virology, immunology, molecular pathology and physiology, and genetics. Successful candidates will have evidence of publication and command of the English language. The Danforth Center is a not-for-profit, independent center for research. For descriptions of openings and information on the Danforth Center, see **website: http://www.danforthcenter.org**.

The Donald Danforth Plant Science Center is an Equal Opportunity/Affirmative Action Employer and encourages applications from underrepresented groups including minorities, women, and people with disabilities.

POSTDOCTORAL POSITIONS
Epithelial Biology/Differentiation and Cell Cycle Regulation

Positions are available to study (1) tyrosine kinase signaling in epithelial tissues and cancer and (2) functions and regulation of cyclin kinase inhibitors in the gastrointestinal tract. Qualified individuals should have a Ph.D. and/or M.D. and prior research experience in molecular biology or biochemistry. Please send curriculum vitae and names of three references to: **Dr. Angela Tyner, University of Illinois College of Medicine, Department of Molecular Genetics, M/C 669, 900 South Ashland Avenue, Chicago, IL 60607. E-mail: atyner@uic.edu.**

POSTDOCTORAL POSITION available to study angiogenesis, fibrinolysis, and blood coagulation. Projects involve protein expression, molecular modeling, enzymology, transgenic mice, and/or cell culture. Salary commensurate with NIH NRSA scale. Send letter with research experience, curriculum vitae, and names of three references to: **David H. Farrell, Ph.D., Department of Pathology, L113, Oregon Health and Science University, 3181 S.W. Sam Jackson Park Road, Portland, OR 97201. E-mail: farrelld@ohsu.edu; website: http://www.ohsu.edu/sompmcb/faculty/farrell.html**. *OHSU is an Equal Opportunity Employer.*

Yale University **POSTDOCTORAL POSITION** available immediately to study the molecular mechanisms of cellular differentiation and related signaling pathways using biochemical approaches and small molecule screening assays. Experience in molecular biology, biochemistry, tissue culture, and signal transduction pathways preferred. **Website: http://www.yale.edu/crews**. Please send curriculum vitae, a brief statement of past research, and names/addresses of three references to: **Dr. Craig Crews, P.O. Box 208103, Department of Molecular Cellular Developmental Biology, Yale University, New Haven, CT 06520-8103.**

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIPS IN APPLIED CONSERVATION

The Nature Conservancy (TNC) announces the fifth round of David H. Smith Conservation Research Fellowships, which provide two-year postdoctoral support in applied conservation biology. Each Fellow will carry out research pertinent to conservation issues in the United States at an institution selected by the Fellow and in close association with a TNC mentor. Research will have relevance to sites or ecoregions that TNC has identified as having conservation priority. Research themes are open; past Fellowships have focused on conservation planning, climate change, avian conservation, freshwater and riparian ecology, and invasive species. Proposals are due February 1, 2002. Funding for Fellows will be available August 2002. For more information, including the proposal guidelines and selection criteria, see the Smith program **website: http://www.smithfellows.org**. You can also request a copy of the guidelines by sending an e-mail or writing to: **Smith Conservation Research Fellowship Program, The Nature Conservancy, 4245 North Fairfax Drive, Suite 100, Arlington, VA 22203-1606. E-mail: postdoc@tnc.org**. *The Nature Conservancy is an Equal Opportunity Employer.*

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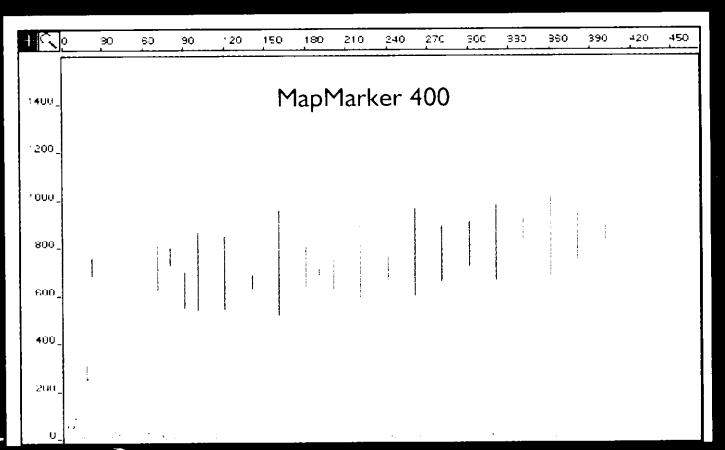

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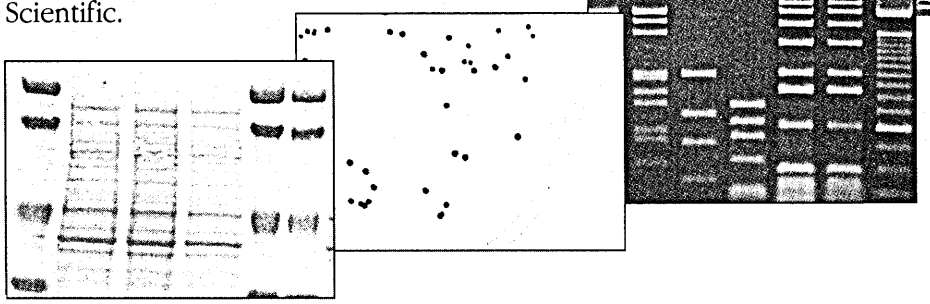

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