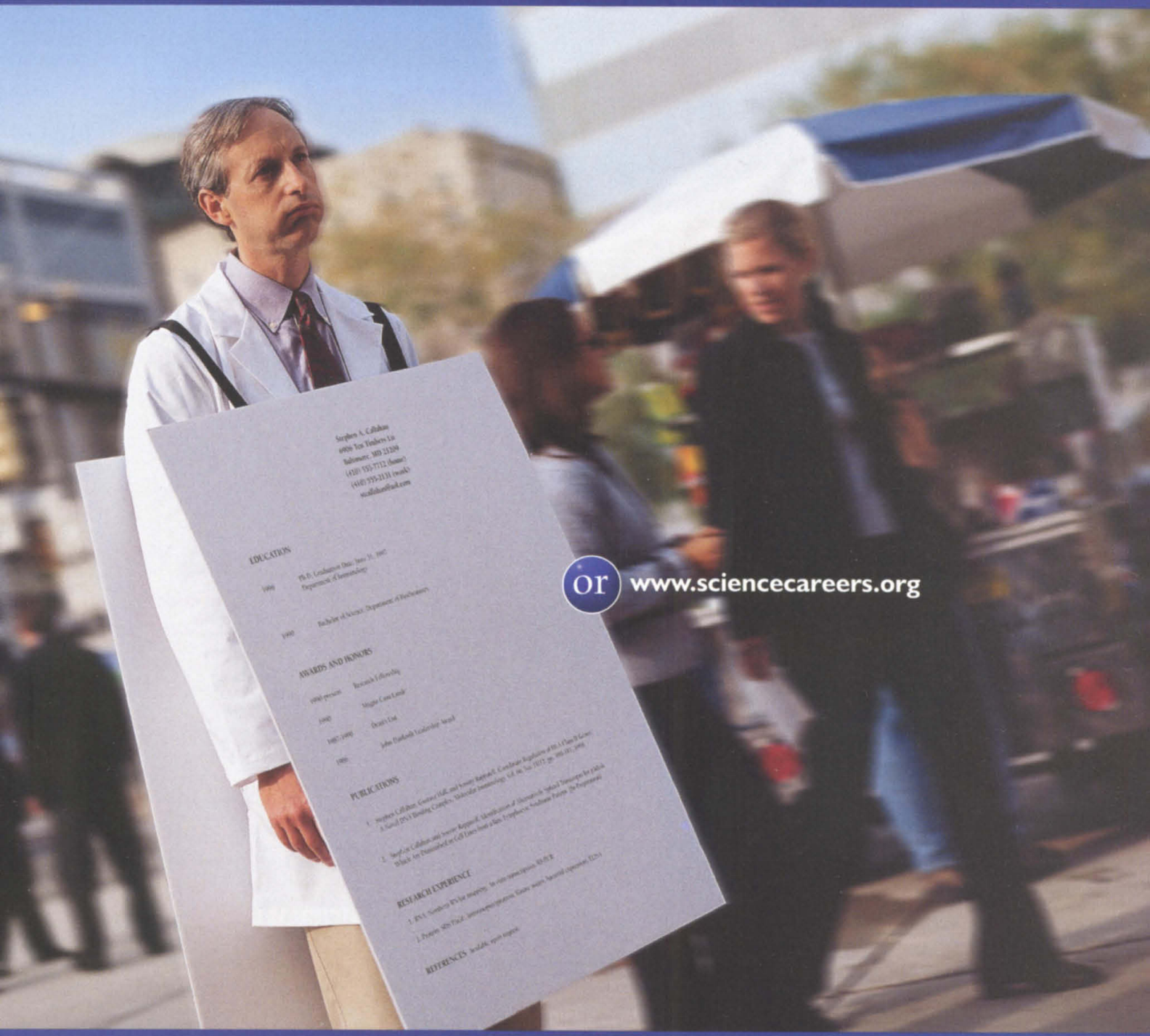

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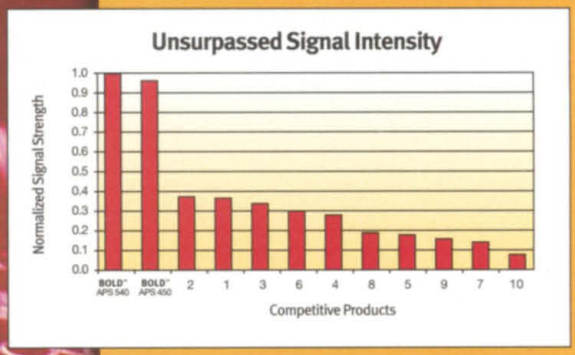

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When it comes to sophisticated data analysis, especially fitting of curves to data, general number-crunching programs such as Microsoft's Excel just won't do. High-end statistical packages offer excellent curve-fitting functions but often require much time to master. What many researchers desire is an easy-to-learn data-fitting package that does its job well. QuantumSoft's popular pro Fit software, which has recently been updated for Mac OS X, fits the bill.

Although the program is somewhat complex, beginners can almost start using it straight out of the box. A separate program called Quick Introduction jumpstarts the user with demonstrations of curve fitting of several sample data sets. The program uses a spreadsheet metaphor (over 16,000,000 cells). Data plotting functions are fairly standard, allowing user control of axis information, plot type, and appearance. All items on a plot are easily "grabbed" with a double-click, permitting users complete control of font, size, color, and other appearance parameters.

pro Fit comes with several functions for fitting data (e.g., exponential, spline, polynomial), and users can customize the program by creating their own fitting functions. Curve fits are performed almost instantaneously, and export and import options are impressive. pro Fit will import data from Igor, Kaleidagraph, text files, HDF files, and JCAMP-DX files. pro Fit's inability to open Excel files is an unfortunate oversight, but the program will allow a user to paste data directly from spreadsheets. Plots can be exported in EPS, PICT, GIF, and JPEG formats, as well as pro Fit native files.

The program is quirky in design. With data, plots, and parameters controlled in different, unconnected windows and with functions selected separately from a menu option, it is easy to get lost while performing an analysis, resulting in plots that don't make sense. Different fits can be superimposed on each other in the same plot, but how to remove them once they are there is not readily apparent. To the program's credit, it is easy to learn basic functions just by playing around with it for a while. Also, built-in support for AppleScript allows users to customize pro Fit for almost any desired use. Though it may not be the ideal solution for novices, pro Fit does have a lot to offer. **—Kevin Ahern**

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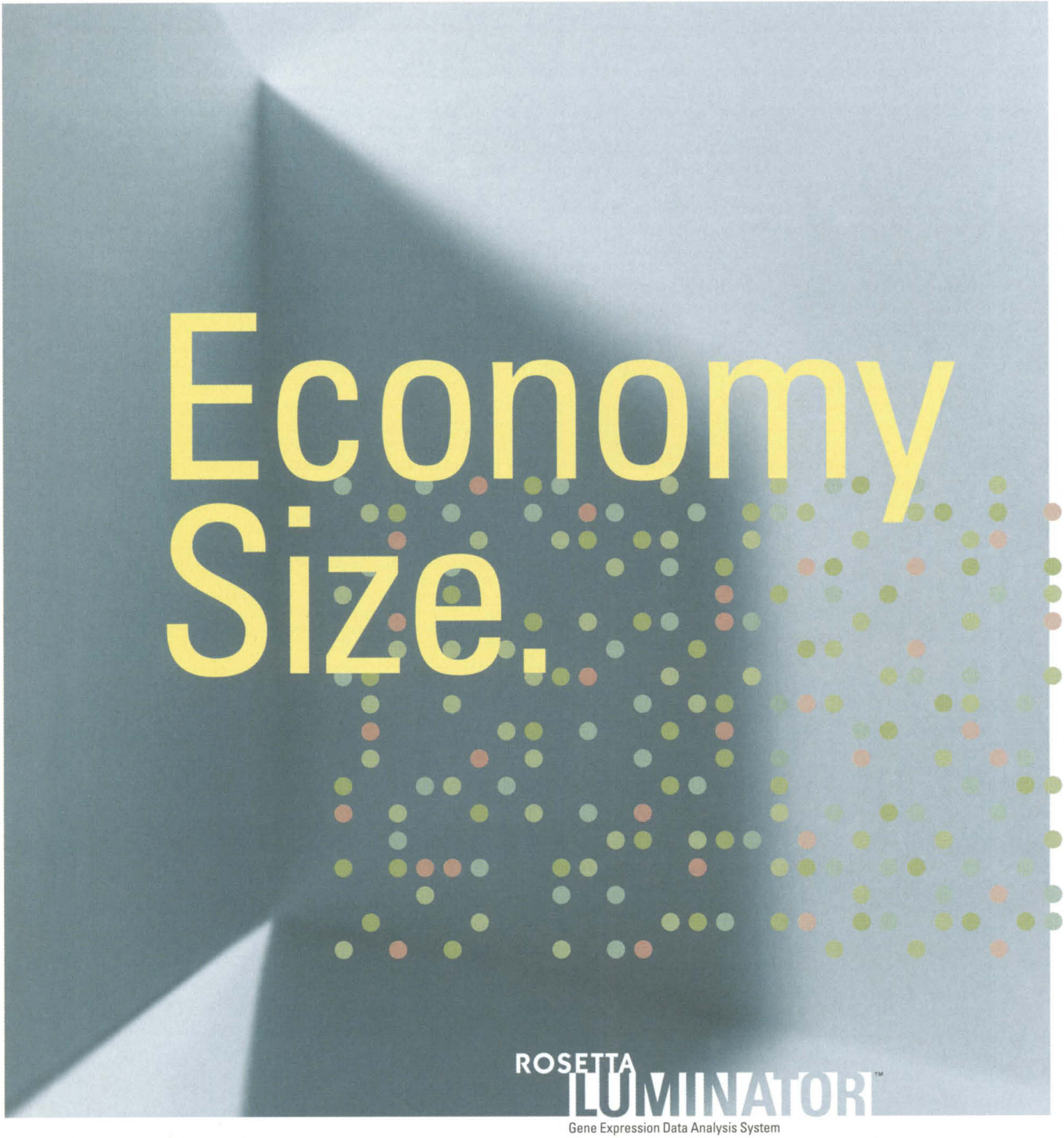

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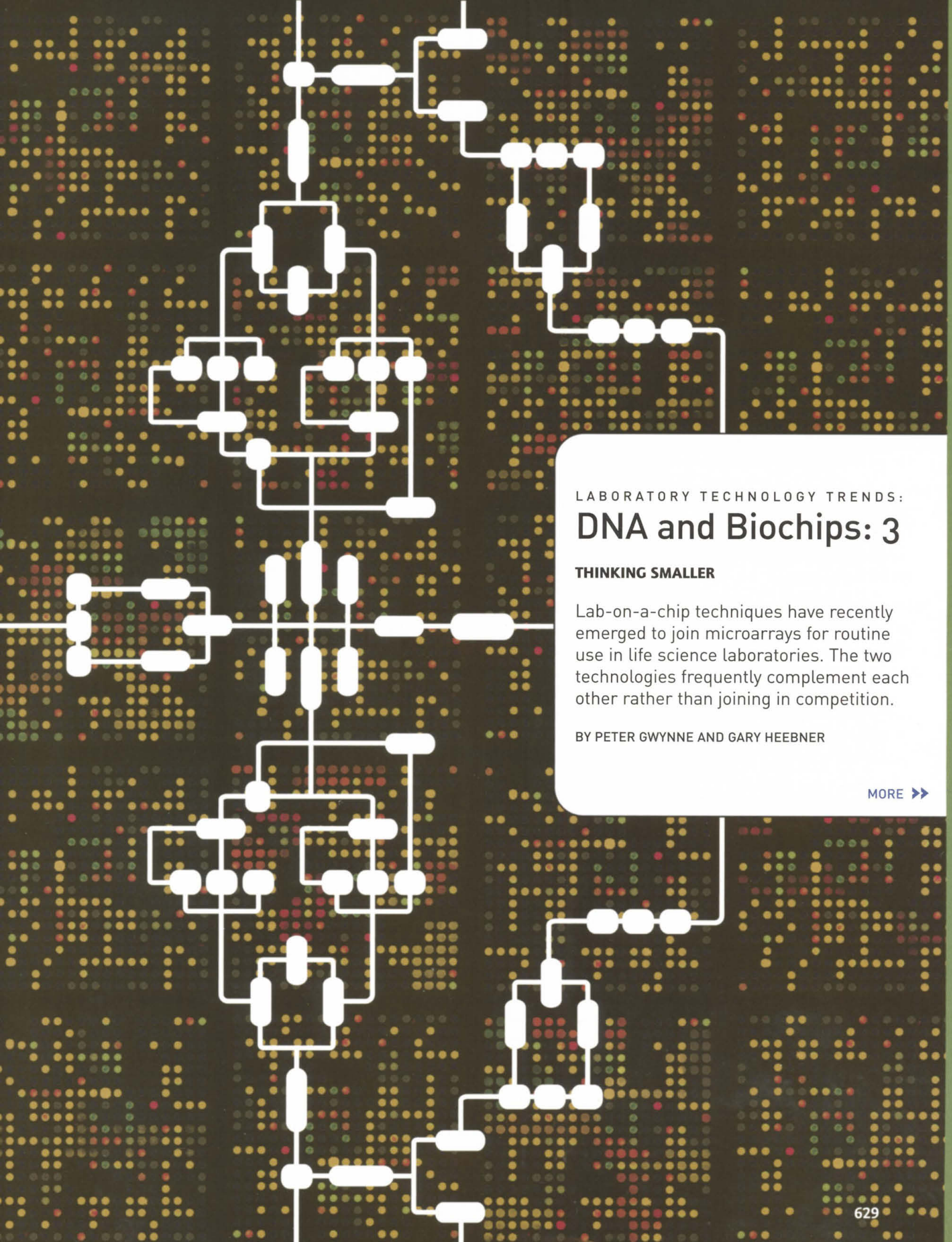

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DNA and Biochips: 3

THINKING SMALLER

Lab-on-a-chip techniques have recently emerged to join microarrays for routine use in life science laboratories. The two technologies frequently complement each other rather than joining in competition.

BY PETER GWYNNE AND GARY HEEBNER

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The world of life science research has changed dramatically over the past decade. Researchers used to working in laboratories full of glassware, stirring plates, and centrifuges now rely on miniaturized systems with tiny cards or chips that contain virtual laboratories on a microscopic scale. As the new technologies catch on, they enable researchers to do more with less – to achieve more results using smaller amounts of reagents.

Among the new technologies, DNA microarrays have already proven their value in genomics research. Pioneered by **Affymetrix** and other companies, these new research tools have proved essential in sequencing several genomes, in gene expression profiling, and in analysis of single nucleotide polymorphisms (SNPs). Much of the gene discovery from the Human Genome Project was based on the use of DNA microarrays.

Since then researchers have applied microarrays to new uses. "They are a lot more accepted," says Trevor Hawkins, senior vice president, genomics at **Amersham Biosciences**. "People are becoming very interested in looking beyond the human genome. They are very affordable for looking at other genomes. If you want a skunk genome chip, say, you can have it made for you once you have the sequence."

More recently, companies such as **Ciphergen Biosystems** have extended the principles of microarrying from DNA to more complex entities. Protein chips achieve the difficult task of directly measuring the relative levels of proteins as they react with other proteins and with different molecules. That's significant because proteins represent a key research thrust for the future. "We realized about three years ago that proteomics would be the next battleground for discovery, and that it's a much greater problem than DNA arrays," says Len Napolitano, deputy director of the Center for Exploratory Systems & Development at **Sandia National Laboratories.**

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.*

This is the third of a three-part series. The first part appeared in the 4 January 2002 issue of Science *and the second in the 10 May 2002 issue.*

SOLUTIONS SEEKING PROBLEMS

Within the past year, another technology based on thinking smaller has arrived in life science research labs. Just a few years ago, microfluidics was scarcely more than a concept. Today it has become reality in the form of lab-on-a-chip products that have shown promise in a wide range of routine laboratory procedures, from sample preparation to separation. Several companies have already introduced practical laboratory research products based on microfluidics.

Like microarrays in their early years, microfluidics technologies and labs-on-a-chip must still prove their value to life scientists. "Although the technology has made an excellent start, its full potential has not yet been realized," says Tony Owen, drug discovery solutions marketing manager, Germany, for **Agilent Technologies**. "A lot of microfluidics technologies are solutions looking for problems," agrees Michael McNeely, president and CEO of microfluidics firm **BioMicro Systems**. "To date there have been very few real opportunities and products brought to commercialization that look as if they can have a positive impact."

In part, the slow development of microfluidics stems from the increasingly complex nature of the problems that it must tackle. "The general opinion is that lab-on-a-chip technology is advancing at the same pace as DNA chips some years ago," says Stefan Ståhl, chief scientific officer of Swedish firm **Affibody**. "It is advancing a lot in the protein chip area, but proteins are far more complicated in their nature than DNA in microarrays."

Dawn Madden, senior director of marketing at **ACLARA Biosciences**, summarizes the general attitude. "Microfluidics is probably less significant right now. But it will become very significant as we go forward," she says. "With microfluidics you need valuable killer applications to be put to use. It is a technology in need of a lot of applications."

In fact appropriate applications are beginning to emerge. "Over the last one and a half to two years we've been moving to routine applications for lab-on-a-chip technologies," says Mike Boyce-Jacino, vice president and chief scientific officer of **Orchid Biosciences**. "In our case processing of high throughput arrays is becoming a routine use. On the clinical side I see a lot of interest in self-contained devices for diagnostics."

COMPETITIVE OR COMPLEMENTARY?

Not surprisingly, microfluidics finds applications in situations where the technology offers specific benefits. "You're looking to take advantage of what microfluidics does especially well," explains Darwin Asa, marketing manager for drug discovery at **Tecan**. "It's about getting better mixing, purer environments, and doing things in a sealed platform. Microfluidics platforms will be useful whenever they enable something that you can't do with a microplate."

That suggests that microfluidics technologies can complement microarrays rather than compete with them. "We see microfluidics as incredibly com-

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plementary to the suite of microarray tools we have," says Hawkins of Amersham Biosciences. "Microfluidics is extremely complementary to microarrays," agrees McNeely of BioMicro Systems. "Most of our efforts are designed to interface with existing technology systems from the perspectives of preparation and handling."

Agilent's Owen sees both competitiveness and complementarity. "To a large extent microarrays and labs-on-a-chip are different and in some ways they're similar," he says. "Array systems do one thing: They characterize in some way a mixture from a gene expression. They're not very good at quantizing. They provide answers to thousands of variations on one simple question. Microfluidics is more like chromatography. It's a more fundamental method that is very flexible and can provide answers to complex questions. It could be applied to small molecules and other samples. It has a much wider opportunity for application."

Owen's colleague Douglas Amorese, Agilent's R&D manager for microarray development, develops that theme. "I think the two systems are very complementary," he says. "Microarrays are aimed at being able to ask thousands of questions of a single sample. Labs-on-a-chip are able to process large numbers of samples and ask fewer questions of each one."

Affymetrix, the corporate father of microarrays, has sampled microfluidics. "In 1994 we received a government grant of $31 million to do lab-on-a-chip," says founder and CEO Stephen Fodor. "We demonstrated micro-PCR and microfluidics. At the time the relative value versus relative cost didn't look good. But we have the intellectual property to do it and make lab-on-a-chip technology complementary to our microarray technology."

Certainly both technologies are designed to satisfy the same ultimate needs. "Are they complementary? You bet," says Fodor. "People are demanding more and more information. And they need to know that the information they get is meaningful. The field has moved dramatically toward the delivery of knowledge. That's a pretty strong concept." Adds Owen: "The largest use for microfluidics systems today is the quality control of RNA for microarray experiments. That demonstrates the complementarity of the two techniques."

HIGH DENSITY MICROARRAYS

A DNA chip or microarray generally consists of a slide or wafer whose surface serves as the anchor for thousands of DNA samples. The chips can have thousands of spots or features that are arranged in a regular pattern, with the location of each spot precisely known.

Production of a chip begins with a substrate such as glass or silicon. First, oligonucleotides are either synthesized in situ or spotted onto the slide using premade DNA sequences of about 25 to 30 nucleotides called n-mers; *n* stands for the number of nucleotides in each sequence. The sequences of these oligonucleotides also need to be defined so that these DNA sequences can be synthesized.

Fabricating a DNA microarray using a photolithographic technique adapted from that used by the electronics industry to make semiconductors allows for the creation of very high-density spots or features. Masks that allow light to shine onto an area of the slide direct the addition of each DNA molecule, as the oligonucleotide chains are built via a photo-activated DNA synthesis process. Because of their high cost, these masks are most suitable for producing large numbers of standard microarrays. Their advantage over spotted microarrays stems from the fact that the technique allows many arrays – 49 to 400 – to be made simultaneously rather than one at a time. In addition the technique literally builds hundreds of thousands of oligonucleotides in place on a single array. As a result, the distance between spots can be much smaller than with spotted arrays.

Affymetrix was the first company to design and fabricate ready-to-use high density DNA microarrays via photolithography. In recent years its DNA chips have increased in density and decreased in cost, making them more accessible to researchers worldwide. "You have to think about value add," says Fodor. "We will focus primarily on delivering information from the genome directly to the benchtop. To do that we will go to higher densities and higher information capacities."

GENECHIP ARRAYS AND OTHERS

One of the firm's hottest-selling products is its Human Genome U133 GeneChip array, introduced last year. "This is a two-chip set that contains over a million probes that interrogate nearly 40,000 unique transcripts across the human genome," Fodor explains. "Those comprise only about 2 percent of the known genes." The chip has a wide variety of applications from target validation to evaluating gene response to different stimulants such as drugs and environmental conditions. "There is also the clinical market, where the coverage of the known genes has become so complete that we can move toward personal medicine," Fodor says.

Two younger companies, **Febit** and **NimbleGen**, have used technology developed by **Texas Instruments** to fabricate DNA microarrays. They use micromirrors to turn light rays on and off at the location of each spot or feature, in effect taking the place of the mask that directs Affymetrix's photoactivated oligonucleotide synthesis. Computers eliminate the need for permanent masks by directing each mirror. These "virtual masks" allow quick changes to the DNA microarrays, as well as lowering the cost of making a small number of arrays.

Chief scientific officer Peer Stähler points out the value of Febit's prototype DNA analysis instrument, called geniom one. "It is designed for biologists," he explains. "You don't need to become an expert in surface chemistry, handling, or washing steps. In addition, it is one of the first instruments in which you can use computer files on your hard disk. With a few mouse clicks you can get the process started to create the type of microarray you need – either a proven standard array selected from your hard disk or a customized array you design de novo."

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The company sees individual researchers as its potential customers for geniom one. "We call it the benchtop array," Stähler says. "One day we hope to bring back microarrays to the individual researcher rather than keep them only in central facilities."

Agilent has also eliminated the need for a physical mask in its custom oligonucleotide array fabrication. They use ink-jets as microreagent delivery devices for standard phosphoramidites and activators to precise locations where they react to synthesize 60-mer oligonucleotides. "It is a little more complicated than generating and printing a PowerPoint slide, but conceptually the same," says Amorese. "And like a PowerPoint slide it exists as a digital file that can be modified at will."

SPOTTING THE ARRAY

In a way, the field is returning to the past. Individual researchers have already made key contributions to microarray technology and production. In the mid 1990s, Patrick Brown's laboratory at **Stanford University** pioneered the technique of spotted microarrays, so called because a robotic spotter applies tiny samples of complementary DNA (cDNA) to slides. The spots are almost always larger that those created by the Affymetrix method, meaning that each array has fewer spots.

Robotic spotters use steel pins with very small surfaces to pick up DNA from a microwell plate and deposit the sample onto the surface of a slide. These systems can be programmed, allowing the researcher to develop a highly automated production system. Companies that offer robotic spotters or arrayers include **BioRobotics**, **Cartesian Technologies**, **Genetix**, and **Packard BioScience**.

Ink-jet printing is another method of depositing DNA samples onto slides or chips. Agilent has also developed a spotter that uses the ink-jetting technology originally designed for personal computer printers to deposit presynthesized DNAs. One of the advantages of this system is that there are no pins to wash after each sample is deposited on the slide; but they do, of course, require rinsing after each sample is dispensed.

Once Brown's laboratory announced its spotting technique, research laboratories around the world quickly picked it up and started to make their own microarrays. Not surprisingly, companies saw market potential in do-it-yourself microarraying. Today, such suppliers as **BD Biosciences**, BioRobotics, **Eppendorf**, Genetix, and **Genomic Solutions** offer many of the tools that scientists can use to produce their own arrays.

Some researchers found the instruments necessary for do-it-yourself production of microarrays too expensive. But it did not take long for vendors to recognize a need for ready-to-use arrays. General purpose DNA microarrays for a number of organisms began to appear on the market. Now, Agilent, Amersham Biosciences, **Invitrogen**, **Promega**, and **Stratagene,** among other firms, offer spotted DNA microarrays for research use.

PROTEIN PROBES

While cDNA microarrays can measure the relative levels of messenger RNA expressed in a cell, they can't directly measure the proteins that those messengers produce. Protein chips on the other hand can directly measure the relative level of proteins and their interactions with other molecules. When a protein microarray is exposed to a mixture of other proteins, molecules that naturally interact with the proteins fixed on a slide will bind to those protein probes. The proteins bound to the probes can be labeled and visualized in much the same way as DNA in traditional microarrays. Molecules with strong affinities to the probes represent good candidates for leads in drug discovery, since a drug must bind to its target to be effective.

Several companies have entered the protein chip business, among them Ciphergen, **Large Scale Biology Corporation**, **Phylos**, and **Prolinx, Inc**. "There's a number of players in the protein chip sector, divided into separate categories," says Roland Kozlowski, chief executive of **Sense Proteomic**, the first proteomics company to put functional array products on the market. "Some companies are working on surfaces, some on content, and some on automation and detection."

Kozlowski's firm aims to differentiate itself by providing content. "We array proteins onto our own proprietary surface, which can be integrated with any standard method of detection, including MALDI-MS," he explains. The firm's COVET technology allows the expression of many thousands of tagged proteins from any given proteome. "We're uniquely positioned to be able to handle huge numbers of proteins," Kozlowski continues. "Our main focus is on small molecule-protein interactions, enabling lead optimization, predictive toxicology, and predictive metabolism. Our technology can also be used for target ID purposes."

Chips to Hits

Several organizers offer scientific meetings that allow developers and users to learn about new findings in this rapidly advancing field. For example, **IBC USA Conferences** will sponsor the ninth annual Chips to Hits conference and exhibition from the 28th to the 31st of this month in the Philadelphia Marriott. The event, focusing on the application of microtechnologies to life science, will feature more than 100 scientific presentations and 115 exhibitors. New features this year include a microarray informatics forum, an advanced microarray course, and coverage of microfluidics and lab-on-a-chip technology as well as cell based assays and high content screening. You can find information about the meeting at:

www.chipstohits.com

Prolinx has its own unique approach, via its Versalinx protein microarrays. "Most microarray technology for DNA is two-dimensional in nature," says vice president of research and development Karin Hughes. "To reduce nonspecific binding of proteins, we felt it essential to build a three-dimensional structure on the surface. That's one way in which we set ourselves apart. We also rely on our Versalinx chemical affinity tools that, among other attributes, allow us to modify proteins in solution-separate form from the immobilization step. That affords the ability to better maintain the 3-D structure and therefore the protein activity of our microarrays."

Hughes sees plenty of uses for the microarrays, which went on the market about a year ago. "In-house we've done antibody-antibody interactions, recombinant epitope reactions, peptide arrays, and even a bit of small molecule arrays," she says. "The system is quite versatile and not limited to just proteins and peptides." At present Prolinx sells the tools that customers can use to build their own arrays. "But at some point," Hughes predicts, "we will offer preprinted protein microarrays."

THE MOVE TO MICROFLUIDICS

For all their promise, protein microarrays represent just one new thrust into the application of ultra-small technology to life science. Microfluidic devices are the latest rage in laboratory miniaturization and automation. Scientists can apply them to several routine laboratory procedures, from DNA sample preparation to chromatographic separation.

Like DNA and protein microarrays, microfluidic technologies offer several benefits. They include decreased sample volumes – meaning both the use of smaller amounts of often expensive reagents and less waste – easy automation, and potentially massive parallel processing of laboratory samples. "Microfluidics can deal with smaller quantities at faster rates than other technologies, and has the ability to integrate mechanical handling with electronic control," says Napolitano of Sandia National Laboratories.

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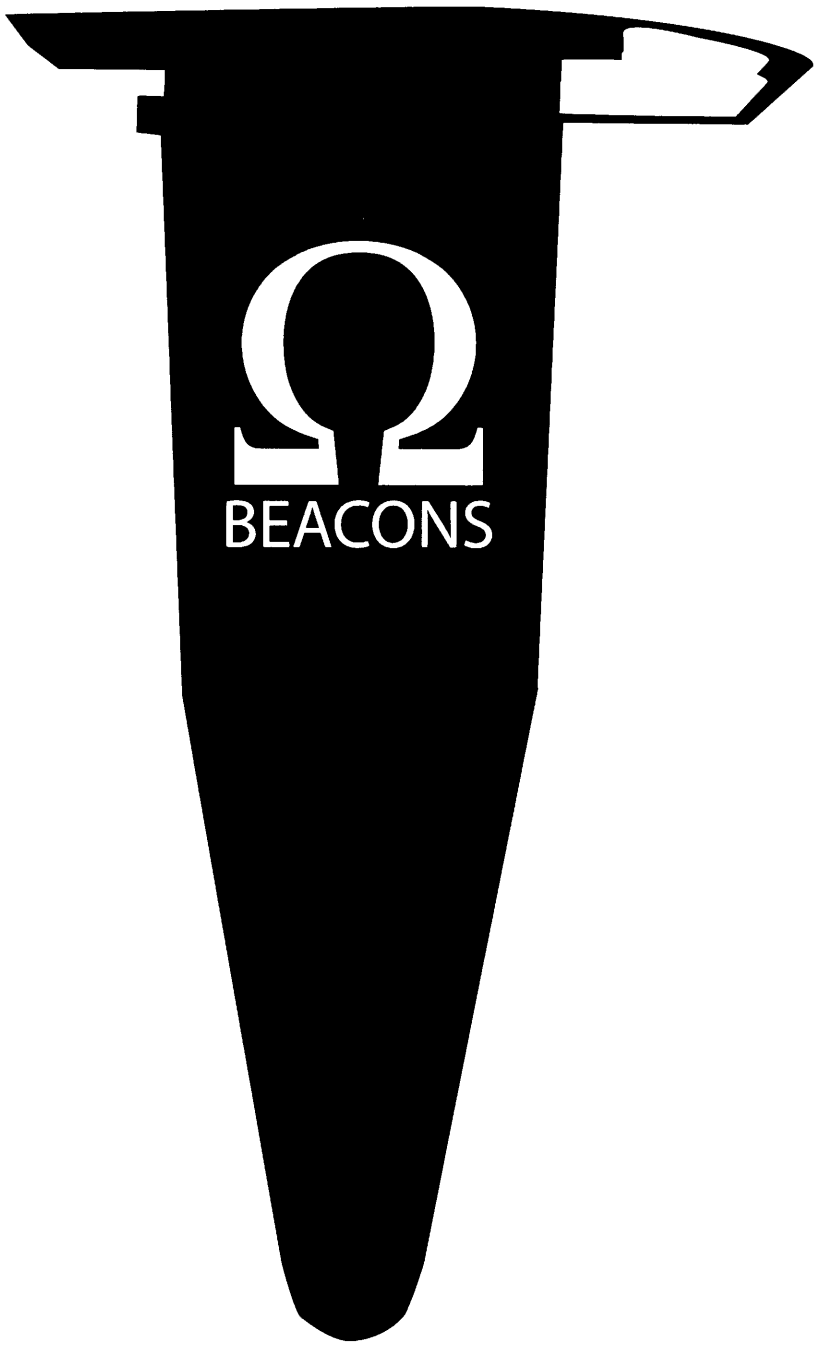

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Macroresults Through Microarrays

Cambridge Healthtech Institute will hold its fourth annual conference on Macroresults through Microarrays, in Boston's World Trade Center next May 13 and 14. The event will focus on microarrays' current performance and projected improvements. It will also examine applications of microarrays and their role in obtaining the larger biological picture. Details of the meeting are available at:

www.healthtech.com/spring.asp

Those abilities translate into potential financial saving. "A typical microarray's cost forces you to think about the cost of the product to be put on it," says Hawkins of Amersham Biosciences. "If a microfluidics device enables you to put on and label the sample economically, that would be a huge advantage." McNeely of BioMicro Systems makes a similar point. "The vast majority of data analysis requires much lower volumes of fluid than current preparations give you," he says. "Using microfluidics technology can save you up to 95 percent of your expense in supplies and manpower."

The channels of a microfluidic device can be as small as several microns in diameter. The movement of fluid through the tiny channels of a microfluidic device is quite different from that of a larger traditional device such as a standard flow cell or tubing. Fluid flow in microfluidic channels is laminar rather than turbulent: Mixing occurs by diffusion not active mixing. Clever design engineers can use this difference to their advantage when developing a microfluidic device.

Microfluidics is actually a technology platform rather than a single type of device. Several ways exist to move fluids through the miniature channels, ranging from electrical power to centripetal forces. The ability to harness those techniques in user-friendly ways will ultimately help determine the relative successes of the different approaches to microfluidics.

The result is inevitable. The microfluidics market is in a state of flux as individual vendors seek to establish suitable niches for their proprietary technology. In the following paragraphs we profile some of those technologies.

APPLICATIONS IN GENOMICS AND PROTEOMICS

Several companies are working on microfluidic devices for genomics, proteomics, and related research areas. ACLARA, for example, uses microfabrication and injection molding techniques to manufacture lab-on-a-chip disposable plastic products, such as its Arteas microfluidic devices, that can move solutions from one microwell to another via a microchannel about 100 microns in diameter.

The company is combining its microfluidics technology with its proprietary eTags, fluorescent labels that have unique and well defined electrophoretic mobilities. "Our eTags are used in proprietary homogeneous bioassays for genes, proteins, and cell surface antigens, which go on a microfluidics platform as well as current capillary electrophoresis [CE] systems," says Madden. The method has unique advantages of high capacity and speed, as well as efficient use of biosamples. "Experiments that were not possible are now possible using a common platform for multiple types of analytes," she continues. "In fact the platform can now be applied to the new paradigm of systems biology. We have hundreds of single fluorescence eTags, each slightly modified for different electrophoretic mobility. They separate within 20 to 30 minutes on standard CE systems – or in a minute to three minutes in a microfluidics device."

Another key benefit is the fact that the technology does not involve solid support. "It's all solution based," Madden says. "So we can look at cell surfaces and do cell based assays more effectively. Our technology takes the same fundamental approach as arrays but in solution, not the solid phase. It forms a kind of bridge between conventional assays and microfluidics technology."

Caliper Technologies, meanwhile, provides expertise in microfabrication, microfluidics, and application development. Caliper has, at times, commercialized its LabChip components through alliances with other companies; for example, Agilent uses LabChip devices in its automated 2100 bioanalyzer system for analyzing nucleic acids, proteins, and cells. The system can perform DNA sample handling, separation, detection, and data analysis in a single instrument that replaces gel electrophoresis. The system has found acceptance in checking the quality of precious RNA samples before they are analyzed on a microarray. "This application ties microfluidics and microarrays together in a useful and compelling manner," says Amorese.

The microfluidic device uses microchannels that contain a network of noncrosslinked polymers for molecular sieving. The instrument's electronics control the movement of fluids on the chip and the channel in which the separations occur. The system uses laser-induced fluorescence to detect and measure the DNA, RNA, or protein fragments in real time. "Since we introduced the instrument at the end of 1999 we've sold 1,500 instruments," says Owen. "Every month people are running more than a quarter of a million samples on the bioanalyzer. This represents one of the most successful introductions of a new analytical technology ever made." The addition of cell fluorescence assays that use pressure drive instead of electrophoresis demonstrates the technology's versatility.

Cepheid is developing fluidic cartridges for DNA analysis. This company plans to develop microfluidic systems for DNA extraction, sample preparation and processing, real-time analysis, and detection in these microscale systems. Samples of blood and other biological fluids present hefty challenges when processed in a small system. Cepheid believes its technologies measure up to those challenges.

MOVING TOWARD DRUG DISCOVERY

Several firms have started to adapt microfluidic technologies for application in drug discovery and related areas. Characterization of proteins, analysis of SNPs, and studies of potential drugs' ADME (adsorption, distribution, metabolism, and excretion) characteristics are among the targets for application.

In one commercial collaboration in the protein array field, Affibody combines unique protein binding ligands that it calls affibodies with lab-on-a-compact disc (CD) technology. The ligands offer several significant benefits over antibodies. In particular, they are easily engineered and are more stable than antibodies. "Our strength is that they are very robust proteins," says Ståhl. "We have very good experience in using affibodies in various separations."

The collaboration intends to create CDs for use in protein characterization and drug discovery. Using combinatorial protein engineering technology applied to this CD platform, Affibody will offer an automated system to capture target proteins. " We are not developing complete chips," Ståhl explains. " Rather, we are focusing on targets and how to solve the question of detection. We are developing small, very robust affibodies of 50 or so amino acids in size. We make them very diverse and select affibodies for any particular protein."

Companies such as Orchid Biosciences have developed miniaturized systems to perform SNP analysis. Orchid's technology platform features its SNP-IT tag array, which gives customers cutting-edge genotyping capabilities. SNP-IT involves a set of biochemical reactions that isolates the precise location of a suspected SNP and then determines the identity of the SNP, using DNA polymerase that plays the key role in the method's accuracy. "We developed the tag array strategy with Affymetrix

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and started using it in our labs last year," says Boyce-Jacino. "We launched the full-fledged product early this year. It enables clients to move to very high volume genotyping, going from a few SNPs per sample to 2,000 per sample." The approach offers significant genotyping capacity for high volume users. It also has the major advantage of multiplexing: It can perform multiple SNP analyses simultaneously.

PFC AND ADME

BioMicro Systems focuses on drug discovery and DNA hybridization. Its core technology, passive fluid control (PFC), uses hydrophobic materials to create microscale fluidic circuits. Tiny fluidic channels that route samples in the device permit researchers to perform complex multistepprocedures by pumping samples and biochemical reagents into functional components.

"Our technology is very different from others in two fundamental ways," says McNeely. "One is simplicity; it relies on natural forces, so that you don't need complicated support equipment. Another advantage of PFC is the price point of the disposable chip. The extremely inexpensive price can be passed on to users."

The technology applies to three specific areas: immunodiagnostics, nucleic acids, and microarray processing. "Our first product, launched in May, is the first microfluidic-based microarray hybridization system for drug development," McNeely says. "The product is targeted at the individual investigator at an academic institution, government laboratory, or biotechnology or pharmaceutical company. This has a direct connection with microarray processing."

Tecan offers a LabCD microfluidics platform for high throughput ADME and toxicity assays for drug development work. The company's microfluidic systems provide all of the components needed for a high throughput ADME assay: CD-based microfluidic devices, software, and protocols and reagents. "We've tried to target those microfluidic applications not easy to do with microplates or where microfluidics has advantages," says Asa. "We've chosen to bring up the advantages of ADME because it's a big bottleneck right now."

DETECTION TECHNIQUES

The method of signal detection used with DNA chips depends on the type of label used in an experiment. Agilent, **Axon Instruments**, **Hitachi Genetic Systems**, **Molecular Devices**, and **PerkinElmer Life Sciences** offer several common tagging methods, including fluorescent, radioactive, and enzymatic methods.

Fluorescent labels are detected with confocal laser scanners specifically designed for use with DNA microarrays. Such scanners often include software to analyze and interpret the data. They can eliminate unwanted background fluorescence by limiting the distance for picking up signals to those above the plane of the array where the substrate is located. That minimizes detection of stray fluorescent signals from the substrate, dust particles, or the slide itself.

Radioactive labels can be imaged with a phosphorimager or, much less glamorous but still effective, autoradiography film. The most common radiolabels for this procedure are the phosphorus isotopes with atomic weights 32 and 33; ^{32}P produces a stronger signal and is lower in cost while ^{33}P produces a weaker signal that can be used over a greater range but costs more. Radiolabels are most often used with nylon membrane macroarrays such as those offered by BD Biosciences.

Enzymatic detection can also be used with nylon membrane macroarrays. But the technique is not nearly as common as the other two methods. With enzymatic systems, a spectrophotometer can be used to automate the detection process, or the membrane can be visually inspected. Both **Azign Bioscience** and **Genzyme** carry these systems for enzymatic detection.

Lynn Kielhorn, business director of **NanoDrop Technologies**, highlights a problem that has grown as researchers work with smaller and smaller volumes. "The ability to measure the concentration and quality of small samples photometrically hasn't kept pace," she says. "Researchers have had to sacrifice large amounts of valuable sample or skip the measurements." In response, NanoDrop has designed a spectrophotometer specifically for bench measurement of small samples. "The sample is deposited on a fiber optic tip and a second tip brought down to it," explains chief technology officer Charles Robertson. "The sample is drawn out like an hour glass, and we measure through the middle of that hour glass." Kielhorn points out two advantages of the technology. "It's simple to use," she says, "and it can measure concentrated samples; scientists don't have to dilute them."

Once an experiment is conducted the results need to be interpreted. DNA microarrays that contain thousands of samples or spots can produce huge volumes of data. Storing and analyzing the data can cause a serious bottleneck in laboratory research. Indeed, some researchers hope first to perform array experiments with the large comprehensive chips such as those offered by Affymetrix and then to down-size their research efforts by focusing on a specific family of genes. "You need consistency of the data," says Fodor of Affymetrix.

Today's pioneers will undoubtedly add to the body of knowledge about microfluidics and miniaturization as they develop technologies and laboratory solutions for practical applications. Given the wealth of possibilities and the number of companies entering the field, further innovation will inevitably follow.

Peter Gwynne is a freelance science writer based on Cape Cod, Massachusetts, U.S.A. Gary Heebner is a marketing consultant serving the scientific industry, based in Foristell, Missouri, U.S.A.

Young Site on Aging Research

This month marks the first birthday of an online resource run by *Science*. The SAGE Knowledge Environment represents a pioneering effort to help the broad community of scientists interested in aging stay up-to-date on research in their field. "Specialists in aging are spread over a wide range of disciplines," says Kelly LaMarco, the site's editor. "We thought that this was a research community that would benefit from having an electronic community."

The site has four main sections: literature and news; community; resources; and highlights. Original content in the literature and news section includes commentary and review articles written by scientists as well as news articles written by journalists. Site editors rely partly on an active scientific advisory board to keep SAGE KE current in terms of coverage of new findings. Items accessed by visitors divide about evenly between articles by scientists and news articles by journalists. "We're happy we decided to include news," LaMarco says. "Our Noteworthy This Week section is quite popular with our readers." In fact scientists seem to like the entire site. About 5,000 different individuals visit the site each month, each staying there for 25 to 35 minutes on average.

As to subject matter, LaMarco says, "We focus mainly on basic mechanisms of aging and less on pure clinical papers." However, she adds, AAAS and the American Society for Family Physicians plan to introduce a website on aging for practitioners that will contain coverage of clinical studies on aging and age related diseases.

sageke.sciencemag.org

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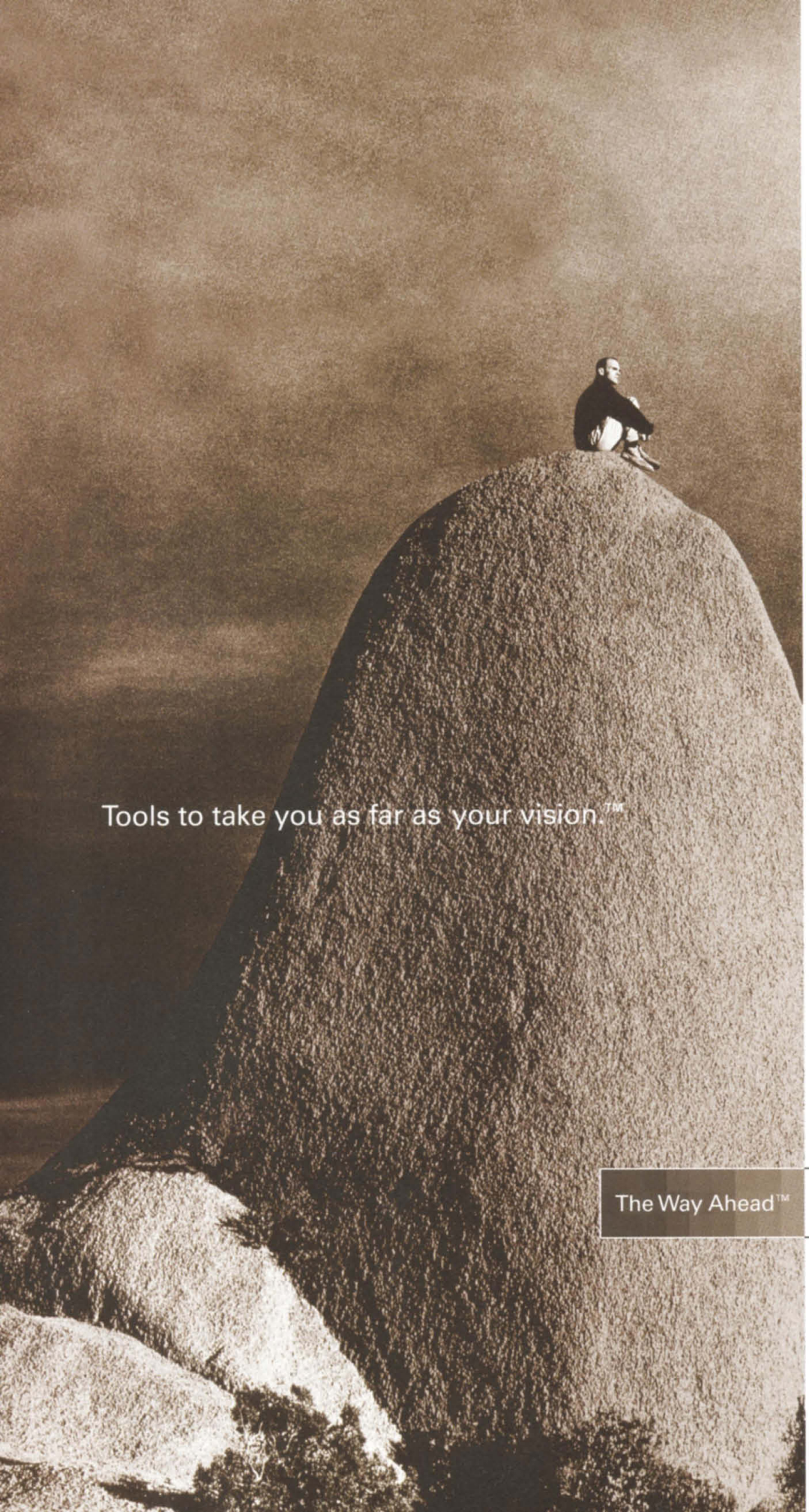

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Applicants should submit curriculum vitae, a concise description of future research plans, and arrange to have three letters of recommendation sent to: **Dr. Teresa Dunn, Faculty Search Committee, Department of Biochemistry and Molecular Biology, Uniformed Services University of the Health Sciences, F. Edward Hébert School of Medicine, 4301 Jones Bridge Road, Bethesda, MD 20814-4799**. All inquiries should be directed to **e-mail: mehorn@usuhs.mil**. Review of applications will begin November 15, 2002, and the search will continue until the positions are filled. *The Uniformed Services University is an Equal Opportunity/Affirmative Action Employer.*

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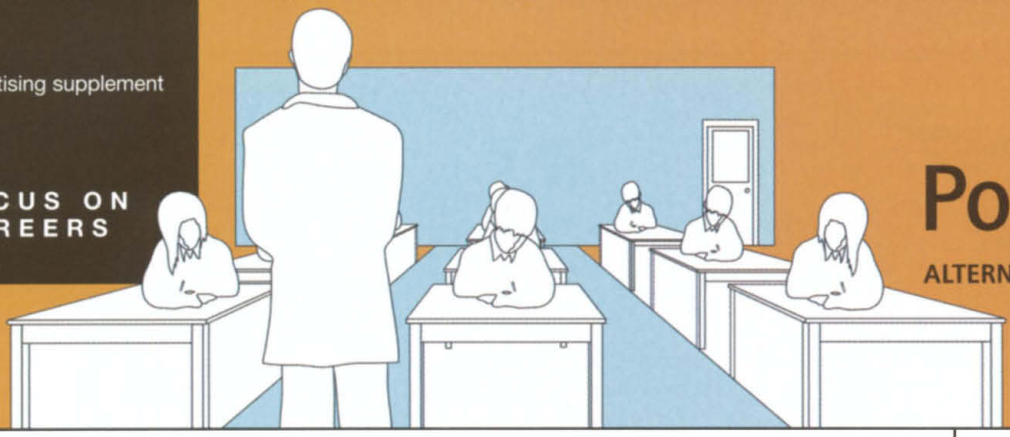

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» Council of Graduate Schools

ELEANOR BABCO

In normal circumstances, Ph.D. biologists seeking academic faculty positions should have high hopes right now. Life science was the only field apart from computer science that gained faculty spots in the United States during the 1990s. Since then the federal government continued to ramp up its support for biological and health departments in universities. And many members of the large cadre of life scientists who gained tenured academic positions in the1960s have begun to reach retirement age.

But life science departments in research universities aren't beating the bushes for promising Ph.D.s and postdoctoral fellows. Why? In part, supply has outstripped demand. "The number of doctorates awarded during the 1990s went up 26 percent in the biological sciences," says Eleanor Babco, executive director of the Commission on Professionals in Science and Technology. In addition, the lagging economy has caused cutbacks in the number of positions on offer. Having seen the value of their pension funds reduced, many professors in their early 60s have decided to stay on the job for a few more years. And even when academics retire, several state universities lack the funds to replace them.

Restrictions don't apply to high-flying students. "Everybody is bidding for the best and the brightest," says Babco. "Those who will get the positions are the ones with excellent credentials who have graduated from the top-notch institutions and have worked with the leaders in research." As to the rest, though: "It's becoming extremely difficult for the 'less than superstar' ones to go through," she continues.

Even the top performers must prove their credentials. "Having two postdocs is becoming the norm," Babco says. "They also need two publications, preferably in peer-reviewed journals, and ideas for their future research for which they can receive funding. They're almost expected to come up with a two-to-three-year plan on how they will support themselves."

Some faculty positions in research institutions remain available to students who don't quite make the top rank. "Checks at Caltech, Dartmouth, and Purdue show that the bulk of the openings appear to be in cross-disciplinary areas, such as magnetic resonance imaging, chemical biology, behavioral genetics, and bioinformatics," says Babco. Positions of that type typically require multidisciplinary training, which requires postdoctoral work in two different fields. Applicants should also demonstrate a breadth of scientific understanding. "They have to be familiar with areas of research outside their specialties," she explains. "It's more and more important for faculty to impart the necessity of doing cross-disciplinary research, especially as the bulk of researchers in life science laboratories will go into industry or government."

In addition, there's a whole world of faculty openings outside the major research universities – in four-year regional and liberal arts colleges and two-year community colleges, for example. "Only about 20 to 25 percent of all students who receive Ph.D.s will teach in a research university," says Debra Stewart, president of the Council of Graduate Schools (CGS). "So the likelihood is that students who want to pursue a teaching career will do so in an institution different from that in which they receive their training."

To expose Ph.D.s to those possibilities, CGS and the Association of American Colleges and Universities operate the Preparing Future Faculty (PFF) program. "The idea is that students should have the opportunity to be exposed to a variety of institutions during their Ph.D.s," says Stewart.

The program, which has helped to train almost 2,000 students since it started in 1993, is based on clusters of four or five academic institutions. A Ph.D.-granting university acts as the anchor to each cluster, which might also include a liberal arts college, a community college, and a Master's-focused institution. "Individual students have mentors on one or more anchor campuses," Stewart explains. "The program allows the students to spend a significant part of their time in the different institutions. They have the opportunity to co-teach, to do campus services, and to get involved in the local communities." Students typically undertake the program near the end of their Ph.D. work when they have the time to leave their home campus.

PFF can provide a salutary effect on students' chances of finding faculty positions. "Students and employers have told us that students' active participation in the program helps to distinguish them from rivals for jobs," Stewart says. "The experience may also show students that they don't really want to teach in the setting they expected." Most of all, the program helps participants to understand the range of faculty options available to them. "We do not want to discourage students from teaching in research universities," Stewart asserts. "The moral force behind PFF is to reduce the zero-sum-game character of faculty career life."

A former science editor of Newsweek, *Peter Gwynne writes about science and technology from his base on Cape Cod, Massachusetts, U.S.A. This is the second of a two-part series. The first part appeared in the 1 February 2002 issue of* Science.

Faculty Positions
Division of Biology

The Department of Biochemistry and Cellular and Molecular Biology and the Department of Microbiology within the Division of Biology at the University of Tennessee, Knoxville are currently seeking four tenure-track assistant professors. Candidates will be expected to develop a strong extramurally funded and nationally recognized research program. The successful candidates will enjoy considerable opportunities for local interactions with cell biologists, geneticists, microbiologists, and structural biologists elsewhere on campus and at the Oak Ridge National Laboratory. The University is the major Tennessee state institution for the education of undergraduate and graduate students. Successful applicants will be expected to participate in the instruction of undergraduate and graduate students within the home Department as well as the Division of Biology. Distinguished young investigators with expertise in the particular areas outlined below are especially encouraged to apply.

ASSISTANT PROFESSORS (2), Molecular Cell Biology: The Biochemistry and Cellular and Molecular Biology (BCMB) Department seeks to fill two tenure-track positions at the assistant professor level to begin August 2003. Candidates should be using modern molecular techniques to solve current problems in cell biology. Applications from individuals with research emphases in neurobiology, cell signaling, plant biology, cell division/cell cycle and nucleic acid/chromosome dynamics would be especially welcome to complement existing strengths within the BCMB Department and other departments in the Biology Division. However, applications from outstanding individuals in all areas of cell biology will be considered. Required qualifications include a Ph.D. and postdoctoral experience in modern cell biology or a closely related discipline, evidence of significant scientific productivity, and a commitment to an integrated program of teaching and research. Interested candidates should send a resume, a description of research experience and of the proposed research program, and the names of three individuals who can provide letters of reference to: **Julia Collins, Cell Biology Search Committee, BCMB Department, M407 WLS, University of Tennessee, Knoxville, TN 37996-0840**. Review of applications will begin on **December 1, 2002** and continue until the positions are filled.

ASSISTANT PROFESSOR, Microbial Ecology: The Microbiology Department seeks to fill a tenure-track position at the assistant professor level in microbial ecology to begin August 2003. Candidates should be using modern methods of molecular biology to answer basic questions about the interaction among microorganisms and their processes in the environment. Applications from individuals with research emphases in signal transduction, quorum sensing and cell-cell communication, environmental security, engineered microbial processes, global change, biofilms, and environmental pathogens would be especially welcome, but applications from outstanding individuals in all areas of microbial ecology will be considered. Required qualifications include a Ph.D. and postdoctoral experience, evidence of significant scientific productivity, and a commitment to an integrated program of teaching and research. Interested candidates should send a resume, a description of prior research experience and his/her proposed research program, and the names of three individuals who can provide letters of reference to: **Gary S. Sayler, Professor and Chair of the Microbial Ecology Search Committee, Microbiology Department, M409 WLS, University of Tennessee, Knoxville, TN 37996-0845**. Review of applications will begin on **November 15, 2002** and continue until the position is filled.

ASSISTANT PROFESSOR, Cellular Microbiology: The Microbiology Department seeks to fill a tenure-track Assistant Professor position in cellular microbiology to begin August 2003. The successful candidate is expected to establish an externally funded research program on basic questions of interactions between microbes and host cells. Research emphasis might include molecular signaling, signal transduction, cytoskeletal reorganization, intracellular trafficking, cell differentiation, and cell death as influenced by the microbe. Investigators studying the relationships between pathogenic bacteria, fungi, or protozoa and animal or plant hosts are especially encouraged to apply. Qualifications include a Ph.D. and postdoctoral experience in cellular microbiology, evidence of scholarly activity, significant scientific productivity, and commitment to an integrated teaching and research program. Interested candidates should submit a letter of application, a detailed curriculum vitae, a description of research experience and of the proposed research program, and names of three individuals who can provide letters of reference to: **David Brian, Chair, Cellular Microbiologist Search Committee, Department of Microbiology, M409 Walters Life Sciences, University of Tennessee, Knoxville, TN 37996-0845**. Review of applications will begin **November 15, 2002**, and continue until the position is filled.

The University of Tennessee is an EEO/AA/Title IX/Section 504/ADA/ADEA institution and does not discriminate on the basis of race, sex, color, religion, national origin, age, disability or veteran status in provision of educational programs and services or employment opportunities and benefits. This policy extends to both employment by and admission to the University.

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University of Idaho

University of Washington
School of Medicine

Washington State University

DIRECTOR

WWAMI Medical Education Program at the University of Idaho, Washington State University, and the University of Washington School of Medicine

The University of Idaho (UI) and Washington State University (WSU) seek a scholar and educator of exceptional ability to serve as Director of the Program in Basic Medical Sciences at the two universities. The WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) Medical Education Program is operated in cooperation with the University of Washington School of Medicine (UWSOM) and includes education of nearly 40 first-year UWSOM medical students, as well as clinical and outreach programs throughout Idaho and eastern Washington. The Director leads this medical education program at two growing, dynamic, research-oriented universities that are only eight miles apart. Both universities are committed to sustaining an ethnically and culturally diverse community in a stimulating educational environment.

The Director is responsible for administering a first year medical curriculum at the UI and WSU, coordinating the program's curriculum with that of the UWSOM, ensuring a productive research environment for WWAMI faculty at the UI and WSU, guiding and counseling first year medical students, and budgeting of funds allocated to the program from state, private and federal sources. The Director also participates in teaching first year medical school courses, and has the opportunity to continue in his/her own active research and graduate education program. The Director will work closely with the WWAMI clinical education centers in Idaho and eastern Washington, and with the Area Health Education Centers (AHEC) in the two states. Additionally, the Director will continue and extend outreach activities in K-12 programs and pre-medical clinical opportunities. Finally, the Director will work closely with the medical communities, state governors' offices, legislators, and public and private health care organizations in Idaho and Washington. The Director will report to the Offices of the Provost at both the UI and WSU, and have an academic rank and salary that is commensurate with prior experience. He/she will also be an Assistant Dean at the University of Washington School of Medicine, and will report to its Dean through the Associate Dean for Academic Affairs. There, the Director will have an affiliate academic appointment in an appropriate department of the UWSOM. Minimum qualifications include an M.D., Ph.D. or equivalent degree in a basic science related to human medicine, demonstrated excellence in teaching medical students and in research. The successful candidate will also have demonstrated excellence in interpersonal communication, as well as an aptitude for the management of budgets, personnel and other resources. The individual must also have a genuine interest in leading a regional medical education program.

A full position description and list of qualifications may be obtained by contacting a Search Committee Chair, or the UI or WSU WWAMI Office websites at **http://www.its.uidaho.edu/wwami** or **http://www.wwami.wsu.edu**. Nominations and applications are requested. Screening of candidates will begin November 30, 2002, and will continue until the position is filled. Please submit a letter of application, including curriculum vitae with contact information for three references to: **Larry Forney, Ph.D. and Ron Brosemer, Ph.D., Co-Chairs, Director Search Committee, University of Idaho, PO Box 444207, Moscow, ID 83844-4207; Email: lforney@uidaho.edu or xaire@wsu.edu.**

To enrich education through diversity the University of Idaho and Washington State University are Equal Opportunity/Affirmative Action Employers.

UNIVERSITY OF MICHIGAN

CELL BIOLOGY – BIOCHEMISTRY – GENOMICS – BIOINFORMATICS

The Department of Molecular, Cellular and Developmental Biology at the University of Michigan solicits applications for four tenure-track faculty positions (pending approval) in the broad area of cell biology and biochemistry. We seek individuals who use a wide range of genetic, biochemical, bioinformatic, and molecular approaches to study fundamental problems in cell biology and biochemistry of any model organism (plant, animal, or microbe). A major restructuring of life sciences in the College of Literature, Science and the Arts has recently established a new Department of Molecular, Cellular and Developmental Biology that currently has 30 faculty and is undergoing a major expansion. The successful candidates will join our active and expanding group of cell biologists and biochemists and will help to define this research area in our department. In addition to establishing a successful research program, the candidates will be expected to participate in undergraduate and graduate teaching in the department. Because of the opportunities for synergistic appointments, we encourage applicants to inform us of other exceptional candidates, including present or potential collaborators. The positions are at the Assistant Professor rank, but exceptional candidates at the Associate or full Professor levels will also be considered. Candidates must have a Ph.D. as well as postdoctoral experience in the relevant areas. To apply, send a cover letter, curriculum vitae, copies of reprints, brief summaries of present and future research plans and teaching interests, and arrange to have three letters of reference sent directly by **November 15, 2002**, to: **Chair, Cell/Biochemistry Search Committee, Department of Molecular, Cellular and Developmental Biology, University of Michigan, 830 N. University Ave., Ann Arbor, MI 48109-1048.**

SENIOR DEVELOPMENTAL BIOLOGIST

The Department of Molecular, Cellular and Developmental Biology at the University of Michigan solicits applications from senior candidates for an anticipated position in developmental biology (Associate Professor or Professor, with tenure). We seek individuals who use innovative approaches to study fundamental problems in developmental biology of any model organism (plant, animal, or microbe). Candidates must have a Ph.D. in Biology or a related field. The successful candidate will join our active and expanding group of developmental biologists, will help to define this research area in our department, and will play a major role in future hiring. The candidates will be expected to participate in undergraduate and graduate teaching in the department. To apply, send a cover letter, curriculum vitae, copies of reprints, evidence of teaching excellence, brief summaries of present research and future research plans, and teaching interests, and the names of four referees who will be willing to send letters of reference to: **Chair, Senior Developmental Biologist Search Committee, Department of Molecular, Cellular and Developmental Biology, University of Michigan, 830 N. University Ave., Ann Arbor, MI 48109-1048.** Applications and nominations will be reviewed until a suitable candidate is identified.

The University of Michigan is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply. The University is responsive to the needs of dual-career couples.

New York University

ASSISTANT PROFESSOR, THEORETICAL CHEMISTRY

Department of Chemistry

FACULTY OF ARTS AND SCIENCE

The Department of Chemistry at New York University invites applications for a tenure-track junior faculty position in Theoretical Chemistry to begin September 1, 2003, pending final administrative and budgetary approval. Applicants should have a strong research record and be committed to teaching. Individuals with innovative plans to utilize theoretical/computational studies of problems in the areas of biomolecular structure and function and/or nanoscale materials chemistry are especially encouraged to apply. Candidates should submit applications including a CV, a list of publications, and a statement of future research plans. Three letters of reference should be sent directly to the Committee. Application materials will be reviewed as received, beginning November 15, 2002. Address correspondence to: **Faculty Search Committee (Theoretical Chemistry), Department of Chemistry, New York University, 100 Washington Square East, New York, NY 10003.**

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THE NEW LIFE SCIENCES INITIATIVE
at Cornell University

CORNELL

CORNELL UNIVERSITY HAS ANNOUNCED A $500-MILLION INITIATIVE TO RECRUIT faculty and provide resources that foster the multidisciplinary study of biology in the post-genomics era. Up to 100 tenure-track faculty will be recruited over the next few years, several major building projects have begun, and a new campus-wide graduate fellowship program is being instituted. Positions in genomics and the physical science/life science interface areas were advertised in *Science* magazine on August 23 and October 4; see also `www.genomics.cornell.edu`.

Cornell University and Boyce Thompson Institute are equal opportunity, affirmative action employers.

Biomedical Engineering and Bioengineering

Cornell University seeks faculty working at the interface of engineering and life science who thrive on interdisciplinary research and teaching. Appointments will be made in both the Bioengineering faculty and the Biomedical Engineering Program (BMEP) faculty.

Biomedical Engineering. BMEP is a university-wide program bridging medicine, biology, and engineering through the development of educational and research programs. *Two tenure-track faculty positions in* ***Biomedical Engineering*** are available with rank open. Research in any area of biomedical engineering will be considered, although there are particular needs for faculty with interests in imaging technology, biomaterials, and cell/tissue engineering. BMEP is responsible for the M.S./Ph.D. Graduate Field of Biomedical Engineering and an undergraduate Biomedical Engineering minor. Development of a professional masters (M.Eng.) degree-granting program is planned. Core faculty will hold joint appointments in the BMEP and one other department appropriate to the candidate's background and mutually agreed upon by all parties.

Bioengineering. The College of Engineering announces *three tenure-track faculty positions in the area of* ***Bioengineering/Biomedical/Biophysical Engineering***, with preference for applicants at the assistant and associate professor level. The college is seeking creative and resourceful individuals with a molecular or cellular orientation in their research programs. Areas of interest include, but are not limited to, nanobiotechnology, biomaterials, tissue engineering, drug delivery systems, biosensors, biomimicry, imaging, computational biology, bioinformatics, and bioenvironmental processes and remediation. They must also have the ability and desire to develop and teach biology-based engineering courses. Successful candidates will be appointed in one of the College of Engineering schools or departments.

Inquiries by e-mail may be addressed to either `Bioeng_search@cornell.edu` or to `BMEP_search@cornell.edu`, depending on the applicant's interest. Formal applications must be submitted by mail to: Bioengineering/BMEP Search Committee, c/o Ms. Bonnie Sisco, 270 Olin Hall, Cornell College of Engineering, Ithaca, New York 14853.

Neuroscience

Cornell University invites applications for *two senior tenured faculty positions in* ***Neuroscience***. The first position is for a scientist using molecular, genomic, and/or biochemical approaches to study neural systems and/or the neural basis of behavior. Research areas include, but are not limited to, molecular neuroethology, neural networks, biophysical approaches, and optical imaging of neural function. The second position is for a scientist who studies the molecular basis of neural function. This would include individuals who use functional genomics and/or cell and molecular biology–based approaches to study fundamental aspects of neuronal cell functions, or neuronal cell signaling. In particular, we seek individuals with expertise in murine model systems who will contribute to a university-wide interdisciplinary program focused on the mouse.

Successful candidates can choose to be based in one of several departments on campus, which include Biomedical Sciences, Molecular Biology and Genetics, Molecular Medicine, or Neurobiology and Behavior. Neuroscience faculty will have access to multiple genomics and life sciences facilities on campus and are encouraged to form collaborations throughout the campus. Applicants should send a cover letter stating the position they wish to be considered for, a *curriculum vitae*, a concise statement of research and teaching interests, the names of at least three references, and reprints of recent papers to the Neuroscience Search, Department of Neurobiology and Behavior, Seeley G. Mudd Hall, Cornell University, Ithaca, New York 14853. Review of applications will begin December 1, 2002.

Biogeochemistry and Biocomplexity

Cornell University is seeking a *tenure-track assistant professor in* ***Ecohydrology*** to investigate and model hydrologically controlled fluxes in complex ecological systems, focusing on surface and near surface hydrological processes and how they impact and are modified by ecological communities. Moisture distribution in the landscape, hydrological transport of chemicals (e.g., nutrients, pollutants) and organisms (pathogens, microbes), and associated ecological patterns are central to this position. The candidate will be expected to work across a wide range of scales from soil pores to watersheds.

A Ph.D. with a strong background in hydrology and the ability to work with ecological systems is required. The person filling this position will be expected to combine the analytically quantitative and physically mechanistic basis of hydrology with the theoretical framework of ecology and the biological and chemical tools of biogeochemistry. The academic home for this position could be in any of several departments including Biological and Environmental Engineering, Civil and Environmental Engineering, Crops and Soil Sciences, Earth and Atmospheric Sciences, or Natural Resources, depending on the background and interests of the person hired. Applicants should send letter of application, a *curriculum vitae*, transcripts, and names of three references to Dr. Michael F. Walter, Dept. of Biological and Environmental Engineering, 104 Riley-Robb Hall, Cornell University, Ithaca, NY 14853. Application review begins January 6, 2003.

Molecular and Chemical Ecology

Cornell (CU) and the Boyce Thompson Institute for Plant Research (BTI) invite applications for *one senior (CU) and two junior (CU and CU/BTI) faculty positions in* ***Molecular and Chemical Ecology*** (MaCE). We are seeking scientists who use molecular, chemical, genetic, genomic, biochemical and/or proteomic approaches to study the chemical and genetic bases of interactions between animals, plants and microbes and/or between organisms and their environment. Research areas include characterization of molecules that mediate the interactions, of receptors and signal transduction pathways through which the molecules act, and of the behavioral, developmental and/or metabolic responses to these molecules. Systems of interest include, but are not limited to, attractive or defensive interactions between animals (invertebrate or vertebrate), plant/insect interactions, microbe/plant or microbe/animal interactions.

Successful candidates will be based in a department on campus, such as Chemical and Biomolecular Engineering, Chemistry and Chemical Biology, Civil and Environmental Engineering, Ecology and Evolutionary Biology, Entomology, Microbiology, Molecular Biology and Genetics, Natural Resources, Neurobiology and Behavior, Plant Biology, or Plant Pathology. MaCE faculty will have access to multiple genomics and life sciences facilities on campus and are encouraged to form collaborations throughout the campus. Applicants should send a *curriculum vitae*, a concise statement of research and teaching interests, and the names of at least three references to: Dr. Mariana Wolfner, Chair, MaCE Search Committee, Department of Molecular Biology and Genetics, 423 Biotechnology Bldg., Cornell University, Ithaca, NY 14853-2703. Inquiries or contacts by e-mail should be sent to: `mfw5@cornell.edu`. Review of applications will begin December 1, 2002.

Molecular Plant-Microbe Interactions

The Boyce Thompson Institute for Plant Research, a not-for-profit organization located on the Cornell University campus, invites applications for *two tenure-track faculty positions in* ***Molecular Plant-Microbe Interactions***. One position will be filled at the assistant scientist level and the other at the assistant or associate scientist level. We are seeking scientists who use molecular, biochemical, genetic, cell biological, genomic and/or proteomic approaches to elucidate mechanisms underlying plant responses to pathogenic or symbiotic organisms. Excellent start-up funds as well as state-of-the-art genomics and plant growth facilities are available at the Institute. Review of applications will begin November 1, 2002 and will continue until the positions are filled. Applicants should send a *curriculum vitae*, a three-to-five-page statement of research interests, and the names of four references to Dr. Gregory Martin, Chair, MPMI Search Committee, Boyce Thompson Institute, Ithaca, New York 14853. See the BTI web site for more information (`http://bti.cornell.edu/`).

Fruit and Vegetable Genomics/Molecular Biology

Cornell University at its Geneva campus seeks an *assistant professor in* ***Genomics and Molecular Biology*** to augment existing excellence in fruit and vegetable genetics, breeding, and physiology. The successful applicant for 100% research position will be expected to develop a research program in genomics/molecular genetics of fruits and vegetables of commercial importance to the northeastern United States. Examples of research topics include the genetic/physiological bases of plant developmental processes, plant responses to biotic or abiotic stresses, and/or fruit or vegetable quality and composition. Use of appropriate genomic, proteomic, molecular genetic, and/or biochemical tools is required. Development of tools and information leading to the improvement of fruits and vegetables is expected either directly from the program of the successful candidate or through cooperation with other project leaders. A competitive startup package, technical support, and excellent laboratory facilities are available.

Please submit applications to Dr. Gary Harman, Chair, Genomics Search Committee, by e-mail (`geh3@cornell.edu`) or by mail (Dept. of Horticultural Sciences, Cornell University, Geneva, NY 14456). They should include a description of qualifications and research interests, names and addresses of at least three references, and a *curriculum vitae* including publications. Application review will begin December 1, 2002.

SENIOR NMR FACULTY POSITION

The Department of Biochemistry at the University of Connecticut Health Center (UCHC) invites applications for a tenure-track faculty position in the area of NMR structural biology. We are seeking an experienced Structural Biologist (**ASSOCIATE PROFESSOR/PROFESSOR** level) with a strong track record of publications and competitive external grant funding who will complement the existing strong collegial environment in structural biology, proteomics, and biophysics at UCHC. A generous salary and start-up package will be offered commensurate with the level of experience. The UCHC structural biology facility contains state-of-the-art 500 and 600 MHz NMR spectrometers. A cryoprobe will soon be added to the 600 MHz spectrometer, and funds are pending for an 800 MHz instrument. The associated NMR computational facility contains a network of Linux servers and workstations. Maintenance, scheduling, and day-to-day operation of the NMR and computational facilities are organized by a full-time manager. UCHC is attractively situated in the picturesque Farmington Valley and is conveniently located about a two hours' drive from New York, Boston, Massachusetts, and the ski slopes of Vermont. Applications (which should contain curriculum vitae, a three-to-five-page statement of research plans, and reprints of up to three representative publications) should be e-mailed in either pdf or rtf format to **e-mail: nmrjob@uchc.edu**. Applicants should also have three letters of reference sent to: **Dr. Glenn King, NMR Faculty Search Committee, Department of Biochemistry, University of Connecticut Health Center, 263 Farmington Avenue, Farmington, CT 06030-3305. E-mail: glenn@pscl.uchc.edu**. Applications close December 31, 2002. *The University of Connecticut is an Equal Opportunity/Affirmative Action Employer. Women and people from diverse racial, ethnic, and cultural backgrounds are strongly encouraged to apply.*

ASSISTANT PROFESSOR OF BIOLOGY

Hofstra University invites applications for a full-time, tenure-track Assistant Professor position in the Department of Biology. The successful candidate will be qualified to teach courses in the following subject areas: animal physiology, comparative vertebrate anatomy, and human anatomy and physiology. We seek an individual who is able to teach undergradauate majors and nonmajors as well as Master's students. Faculty in biology must maintain an active and productive research program accessible to both undergraduate and Master's research students. The specific areas of research are open. The Department of Biology is a medium-sized but diverse and growing department. Candidates must have a Ph.D. and demonstrated teaching ability; postdoctoral experience is preferred. Candidates should submit a letter of application, their curriculum vitae, a statements of research and teaching interests, and have three letters of recommendation sent to the following address: **Faculty Search, Department of Biology, Hofstra University, Hempstead, NY 11549-1140**. Additional information is posted at **website: http://people.hofstra.edu/faculty/christopher_p_sanford/antaomy.htm**. Application materials should be received by December 7, 2002. *Equal Opportunity Employer.*

The University of Wisconsin–Whitewater (UWW) seeks a tenure-track **ASSISTANT PROFESSOR** in biological sciences in comparative anatomy to begin August 25, 2003. UWW is a premier public regional university with an emphasis in undergraduate research. **Website: http://facstaff.uww.edu/biology/search02.html**. Deadline: December 9, 2002. Contact: **Biological Sciences, University of Wisconsin–Whitewater, 800 West Main Street, Whitewater, WI 53190. Telephone: 262-472-1092**. *Affirmative Action/Equal Employment Opportunity Employer.*

FACULTY POSITION IN ANALYTICAL CHEMISTRY
Department of Chemistry
McMaster University

The Department of Chemistry at McMaster University invites applications for a tenure-track **ASSISTANT PROFESSOR** position in analytical chemistry. The successful candidate will hold a Ph.D. in chemistry, preferably with relevant postdoctoral experience, and will be expected to develop a strong, externally funded research program and participate fully in teaching at both the undergraduate and graduate levels. The Department has superb instrumentation facilities (including a suite of optical spectroscopy, mass spectrometry, and other sample characterization equipment) and is in the midst of a period of active expansion and renovation of both its research and undergraduate teaching facilities. Applications including curriculum vitae; research proposal; statement of teaching interests; and letters from three references should be sent by November 30, 2002, to: **Dr. J. D. Brennan, Chair, Analytical Search Committee, Department of Chemistry, McMaster University, Hamilton, ON L8S 4M1 Canada. Telephone: +1-905-525-9140, Extension 27033; FAX: +1-905-522-2509.**

All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be considered first for this position. McMaster University is committed to Employment Equity and encourages applications from qualified men and women, members of visible minorities, aboriginal peoples, and persons with disabilities.

ASSISTANT PROFESSORSHIPS
Whitney Laboratory
University of Florida

The Whitney Laboratory, a research center of the University of Florida, is offering two 12-month, tenure-track, full-time research positions in neuroscience or cell biology. We are seeking creative and innovative individuals who will bring an interdisciplinary approach to studies of fundamental biological problems using marine or comparative models, exploiting the opportunities of the postgenomic era of biomedical science.

Exceptional candidates in all fields of neuroscience, cell biology, zoology, genomics, proteomics, bioinformatics, and computational biology are strongly encouraged to seek further details of the positions at **website: http://www.whitney.ufl.edu/facultysearch.htm**. Excellent state-of-the-art research facilities and competitive start-up packages are available.

Applicants should submit current curriculum vitae; a statement of research interests; and three letters of recommendation by December 6, 2002, to: **Chair of Search Committee, Whitney Laboratory, 9505 Ocean Shore Boulevard, St. Augustine, FL 32080**. Applications should be received by December 6, 2002. *The University of Florida is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT or **ASSOCIATE PROFESSOR** position. The Center for Fluorescence Spectroscopy is expanding its research effort on the interaction of fluorophores with metallic particles, which represents a new fluorescence technology. Senior-level positions are available for individuals with a Ph.D. and experience in synthetic chemistry or surface chemistry. Specific experience in metallic colloids, fluorescent probe synthesis, surface plasmon resonance, or related areas is desirable. All applicants should have a deep interest in applying state-of-the-art fluorescence methods to biomedical research.

Appointments may be nontenure-track Assistant or Associate Professor levels. Depending upon the level, the applicant may be expected to obtain independent funding. Applicants should forward curriculum vitae, three letters of recommendation, and at least three reprints to: **Chemistry Search Committee, c/o Dr. Joseph R. Lakowicz, University of Maryland at Baltimore, Center for Fluorescence Spectroscopy, Department of Biochemistry and Molecular Biology, 725 West Lombard Street, Baltimore, MD 21201.**

WAYNE STATE UNIVERSITY

BIOLOGY FACULTY POSITION

The Department of Biological Sciences at Wayne State University anticipates an opening at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level (tenured/tenure track). Individuals with research programs in aging, environmental microbiology, comparative eukaryotic genome evolution, genetics, and cell/molecular biology are especially encouraged to apply. However, outstanding candidates in other areas will be given equal consideration. Applicants with research programs utilizing model organisms and molecular, biochemical, genetic, or physiological approaches are strongly desired, as are applicants with interests in human biology. The Department is housed in the six-story Biological Sciences Building, which contains modern, spacious research laboratories and outstanding facilities for microscopic imaging, cell culture, DNA microarray analysis, and DNA sequencing. Vertebrate and invertebrate animal facilities are also available. Wayne State University is a large, comprehensive, nationally ranked research institution and a major participant in the 20-year, $1 billion Michigan Life Sciences Corridor research initiative. Applicants must have a Ph.D. degree, postdoctoral experience, and an outstanding record of research achievement. The successful applicant is expected to establish and maintain a vigorous, externally funded research program and participate in graduate and undergraduate education. See **website: http://bio.wayne.edu** for additional information. Applicants should submit their curriculum vitae, a statement of research plans, and have three letters of reference sent to: **Chair, Faculty Search Committee, Department of Biological Sciences, Wayne State University, 5047 Gullen Mall, Detroit, MI 48202**. The search will remain open until the positions are filled but review of applications will begin immediately. *Wayne State University is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are especially encouraged to apply.*

GENETICS AT UNIVERSITY OF NORTH CAROLINA–CHAPEL HILL

The Department of Genetics is continuing to expand its faculty recruitment. We are specifically targeting human genetics. Candidates interested in genetic basis of diseases, cancer genetics, molecular evolution, structure/function, and genomic organization are encouraged to apply. UNC–Chapel Hill has exceptionally strong programs in medical genetics, mouse genetics, and invertebrate genetics. The primary academic appointment will be in the Department of Genetics with the possibility of joint appointments in relevant clinical departments. Send curriculum vitae, a description of research interests, and four letters of reference to: **Dr. Terry Magnuson, Chair, Department of Genetics, CB 7264, University of North Carolina, 103 Mason Farm Road, Chapel Hill, NC 27599-7264**. *UNC is an Equal Opportunity/Americans With Disabilities Act Employer.*

RESEARCH FACULTY POSITION available. The Department of Neurology at Columbia University is seeking an **ASSOCIATE RESEARCH SCIENTIST**. Candidates should have a Ph.D. in biological or related sciences and at least three years of postdoctoral experience in molecular and cellular neurobiology as these relate to mechanisms of neuronal degeneration. Preference will be given to individuals with expertise in techniques of primary neuronal cell culture and systems of viral delivery. Training in imaging techniques including confocal microscopy is required. Applicants must have demonstrated ability for independent research. Send curriculum vitae and a letter summarizing background and accomplishments to: **Dr. Robert E. Burke, Department of Neurology, Parkinson's Research Center, Columbia University, 650 West 168th Street, New York, NY 10032**. *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

The University of Science and Technology. And life.

Tenure Track Assistant Professor in Molecular Ecology

The Department of Biology & Biotechnology invites applications for a tenure track assistant professorship in Molecular Ecology. Applicants are expected to have a doctoral degree, develop a vigorous, externally funded research program, and demonstrate a strong commitment to graduate and undergraduate research and teaching. Ability to interact with colleagues in a variety of biological disciplines is essential. For more information see http://www.wpi.edu/Admin/HR/Jobs/Positions/100536.html

Tenure Track Assistant Professor in Bioinformatics

The Department of Biology & Biotechnology and the Department of Computer Science at WPI invite applications for a joint tenure track position in Bioinformatics. Applicants with doctoral degrees in computer science, the life sciences, or a related area will be considered. The successful applicant is expected to develop an independent, extramurally-funded research program, and to have a strong commitment to graduate and undergraduate teaching. For more information see http://www.wpi.edu/~bioinfo/facultysearch/

The appointments are expected to be made for the 2003-04 academic year. Candidates should send a letter of application, statements of research interests and teaching philosophy, curriculum vitae, and contact information for at least 3 references to: **Human Resources, WPI, Bioinformatics Faculty Search or Ecology Faculty Search, 100 Institute Rd., Worcester, MA 01609-2280.**

Worcester Polytechnic Institute

To enrich education through diversity, WPI is an affirmative action, equal opportunity employer.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA
BIOMATERIALS, BIOMOLECULAR MATERIALS, BIOENGINEERING

The University of California, Santa Barbara seeks to hire highly creative, innovative and productive individuals for multiple new faculty openings at the junior and senior levels in fields related to Biomaterials, Biomolecular Materials and Bioengineering. UCSB is broadening the interfaces among biology, physical science and engineering and is developing a vigorous interdisciplinary and intercollegiate Program in BioMolecular Science and Engineering (BMSE). This Program builds on and is an integral part of UCSB's unique environment for multidisciplinary collaboration, and its recognized strengths in Materials, Chemistry and Biochemistry, Chemical, Mechanical, Electrical and Computer Engineering, Computer Science, Physics, Molecular and Cellular Biology and Device and Nanosystems Science and Technology. UCSB's core strengths are supported and enhanced by a collection of interdisciplinary research and education centers, including the California NanoSystems Institute, the NSF-sponsored Materials Research Laboratory and Institute for Theoretical Physics, the Neuroscience Research Institute, the Marine Science Institute and the Marine Biotechnology Center. The facilities available to carry out research in these fields at UCSB are superb. The positions advertised here are in addition to positions in related areas being advertised by the UCSB Department of Chemistry and Biochemistry, though there is coordination between the searches. Suitably qualified candidates are welcome to apply to both calls.

Research and new instructional initiatives in biomaterials, biomolecular materials and bioengineering are being formulated to build on and enhance current associated strengths. The new faculty appointments may be in BMSE, or in the departments mentioned above, or in some combination of these administrative units, in order to optimize the effectiveness of each hire. Applications from individuals from all disciplinary backgrounds with interests in all areas of Biomaterials, Biomolecular Materials and Bioengineering are encouraged. Specific areas of interest include, but are not limited to: biomolecular materials, motors, machines, biomolecular electronics and opto-electronics, bio-sensors and other bio-devices, biosynthesis and genetic engineering of materials, bio-nanotechnology, metabolic engineering and bioinformatics. Individuals appointed will come in with the opportunity for and expectation of active participation in shaping future hiring and other developments, commensurate with the individual's background and experience.

Application for the positions is open until they are filled. Consideration of candidates will begin immediately; those received by December 15, 2002 will be considered thoroughly for the first round of interviews. Please address all applications, which should contain a letter briefly outlining career plans, a statement of research and teaching interests, curriculum vitae and names and contact information on 3 - 5 references, or have letters of reference sent directly, to: **Bioengineering Search Committtee, Matthew Tirrell and Daniel Morse, Co-Chairs, Attention: Vivien LaFrance, Dean's Office, College of Engineering, University of California, Santa Barbara, CA 93106-5130**. Applications may be sent via electronic mail in PDF format to: **bioengr@engineering.ucsb.edu**.

An EO/AA Employer.

Assistant Professor Physiology
LOYOLA COLLEGE IN MARYLAND

The Biology Department at Loyola College is seeking an Assistant Professor in Vertebrate Physiology for a full-time, tenure-track position starting July 1, 2003. Loyola College is a liberal arts institution with a history of excellent teaching and a strong commitment to fostering the academic and personal development of students. Teaching responsibilities are 9 credits per semester (typically 3 courses). The successful candidate will teach upper-level courses in vertebrate physiology and their specialty area, and introductory-level lecture and laboratory courses. The appointee is expected to develop an active research program that results in publications and to involve undergraduates in their research program.

A Ph.D. in Physiology or related discipline, undergraduate teaching experience, and commitment to the Jesuit mission are required. Desired qualifications include postdoctoral experience and experience mentoring undergraduate students in research.

To apply, send curriculum vitae, the names of three references, a list of courses that you would be very interested in teaching including a more detailed description of one upper level course, and statements of your research interests and teaching philosophy to: **e-mail: Physiologysearch@loyola.edu**. Review of applications will begin immediately, and continue until the position is filled. **Websites: http://www.loyola.edu/ and http://www.loyola.edu/biology/**

Loyola College is a Jesuit Catholic institution that welcomes applicants from all backgrounds who can contribute to our unique educational mission. Layola is an equal opportunity employer which seeks applications from women and members of minority groups.

NEW MEXICO STATE UNIVERSITY
Faculty Positions in Science, Technology, Engineering and Mathematics

NMSU is a public land-grant university, 40 miles from the U.S./Mexico border. Recognitions include:

- Doctoral/Research University-Extensive university (Carnegie Foundation for the Advancement of Teaching)
- One of the nation's best universities for Hispanic students (*Hispanic Magazine* and the *Hispanic Outlook in Higher Education*)
- "Best value for your tuition dollar" (Kaplan Newsweek College Catalog)
- 11th nationwide in federal funds received for engineering (NSF)
- 2000-2001 research expenditures exceeded $135 million

The city of Las Cruces is within two hours of national forests and state parks. The Forbes/Milken Institute ranks Las Cruces as the #1 small metro area in which to do business.

NMSU was awarded an NSF-funded ADVANCE Institutional Transformation Program grant to promote gender equity for faculty in STEM (science, technology, engineering, and mathematics) via a range of programs to recruit, develop and retain faculty. STEM searches for faculty are in progress in the following departments:

Agronomy and Horticulture	Electrical and Computer Engineering
Animal and Range Science	Entomology, Plant Pathology and Weed Science
Astronomy	Industrial Engineering
Biology	Mathematical Science
Chemical Engineering	Mechanical Engineering
Chemistry and Biochemistry	Physics
Computer Science	

For more information, visit **http://www.nmsu.edu/~advprog/faculty.html** or contact the ADVANCE office at: **(505) 646-2583** or **pamhunt@nmsu.edu**.

NMSU is an EEO/AA Employer.

POSITIONS OPEN

FACULTY POSITION IN INORGANIC CHEMISTRY
Department of Chemistry
McMaster University

The Department of Chemistry at McMaster University invites applications for a tenure-track **ASSISTANT PROFESSOR** position in any area of inorganic chemistry. The successful candidate will hold a Ph.D. in chemistry, preferably with relevant postdoctoral experience, and will be expected to develop a strong, externally funded research program and participate fully in teaching at both the undergraduate and graduate levels. The Department has superb structural characterization facilities (including magnetic resonance NMR at 200 through 700 MHz, mass spectrometry, and X-ray diffraction) and is in the midst of a period of active expansion and renovation of both its research and undergraduate teaching facilities. Applications including curriculum vitae; research proposal; statement of teaching interests; and letters from three references should be sent before November 30, 2002, to: **Dr. G. J. Schrobilgen, Chair, Inorganic Search Committee, Department of Chemistry, McMaster University, Hamilton, ON L8S 4M1 Canada. Telephone: +1-905-525-9140, Extension 24504; FAX: +1-905-522-2509.**

All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be considered first for this position. McMaster University is committed to Employment Equity and encourages applications from qualified men and women, members of visible minorities, aboriginal peoples, and persons with disabilities.

TENURE-TRACK FACULTY POSITIONS
Department of Bioengineering
University of California, Los Angeles

The Department of Bioengineering at UCLA invites applications from highly qualified persons for faculty positions at all levels. Candidates with a Ph.D. and/or M.D., D.D.S., D.V.M. degrees with an excellent research and teaching track record in bioengineering, biomedical engineering, or related areas are encouraged to apply. Joint appointments with other academic units are possible depending on the candidate's qualifications. The Department is particularly interested in candidates with experience in tissue engineering, biomaterials, nanotechnology, minimally invasive prosthetics, and surgical instruments. Applications including curriculum vitae, names of at least three references, teaching and research statements, and three to five selected reprints should be sent to:

Professor Carlo Montemagno, Chair
UCLA Department of Bioengineering
7523 Boelter Hall
Los Angeles, CA 90095-1600
Website: http://www.bioeng.ucla.edu

The University of California, Los Angeles, is an Equal Opportunity Employer.

ASSISTANT PROFESSOR MICROBIOLOGY

Assumption College invites applications for a tenure-track position at the Assistant Professor rank starting August 2003. Primary responsibility will be teaching microbiology. Additional teaching could include immunology, cell and molecular biology, botany, introductory biology, or courses in the candidate's area of expertise. A new science building (opening summer 2003) includes dedicated space for student-faculty research. Ph.D. and a commitment to undergraduate teaching and research required. Postdoctoral experience preferred. Candidates must understand and support the Catholic liberal arts mission of the college. Send curriculum vitae; statements of teaching philosophy and research interests; graduate and undergraduate transcripts; and three letters of recommendation to: **Dr. Owen Sholes, Department of Natural Sciences, Assumption College, 500 Salisbury Street, Worcester, MA 01609-1296** by December 2, 2002. **Website: http://www.assumption.edu/HTML/Academic/NatSci.**

FACULTY POSITION
Plant Genetics
North Carolina State University

The Department of Genetics at North Carolina State University seeks applications at the **ASSISTANT PROFESSOR** level for a tenure-track faculty position in plant genetics. We seek outstanding individuals employing modern molecular techniques to explore fundamental biological problems using model plant systems. We are particularly interested in applicants working in the area of plant development. Applicants should have a Ph.D.; postdoctoral experience; and clear evidence of significant productivity, creativity, and independence. Successful candidates will be expected to develop vigorous, extramurally funded research programs; participate in the training of Ph.D. candidates; and contribute to graduate and undergraduate teaching. Additional information is available at **website: http://www.cals.ncsu.edu/genetics/.**

Review of applications will begin November 30, 2002, and continue until the position is filled. Applicants should forward curriculum vitae, a brief statement of research and teaching interests, copies of key publications, and arrange for three letters of recommendation to be sent to:

Dr. Stephanie E. Curtis
Plant Genetics Search Committee
Department of Genetics, Box 7614
North Carolina State University
Raleigh, NC 27695-7614
E-mail: securtis@ncsu.edu

NCSU is an Equal Opportunity/Affirmative Action Employer. Americans With Disabilities Act accommodations: Jeffrey Hawley; e-mail: jeff_hawley@ncsu.edu; Telephone: 919-515-5727; FAX: 919-515-3355. In its commitment to diversity and equity, NC State University seeks applications from women, minorities, and persons with disabilities.

NEUROBIOLOGY GENETICS FACULTY POSITION
University of Alabama at Birmingham

The Department of Neurobiology at the University of Alabama at Birmingham (UAB) School of Medicine is undergoing a major expansion and has openings for tenure-track **ASSISTANT Professors** in genetics. We seek individuals with outstanding research productivity or promise in molecular genetics of nervous system function or development. The successful candidate will use tools of modern molecular genetics, will have completed productive postdoctoral training, and be capable of establishing an extramurally funded laboratory. The Department of Neurobiology currently has 12 primary faculty with over $8 million in annual extramural research funding and participates in training graduate students through interdisciplinary programs in neuroscience, cellular and molecular biology, and combined M.D./Ph.D. The Department also houses NIH Program Project and Center grants and has a wide array of core facilities for imaging, electrophysiology, molecular biology, and genetics. Competitive start-up funds and salaries are available. Please send curriculum vitae; statement of research plan; and have three letters of reference sent to arrive by November 7, 2002, to: **Dr. Michael Friedlander, Department of Neurobiology, University of Alabama at Birmingham, 1719 Sixth Avenue South, CIRC 137, Birmingham, AL 35294-0021.** *UAB is an Equal Opportunity Employer.*

The Biology Department at The College of Wooster in Ohio has the following tenure-track positions available: Biology **ANIMAL PHYSIOLOGIST** and biology **VERTEBRATE BIOLOGIST.** See full descriptions at **website: http://www.wooster.edu/oncampus/empop.html** and choose job postings from the Five Colleges of Ohio to locate the specific description. For help, call **Linda Farmer; Telephone: 330-263-2133; e-mail: lfarmer@wooster.edu.**

TWO TENURE-TRACK FACULTY POSITIONS
Biomedical Engineering
New Jersey Center for MicroChemical Systems
Department of Chemical, Biochemical, and Materials Engineering
Stevens Institute of Technology

Stevens Institute of Technology has openings for two tenure-track faculty positions at any professorial rank in the Department of Chemical, Biochemical, and Materials Engineering (**website: http://www.soe.stevens-tech.edu/cbme/**). The Department, which has annual research expenditures over $2.5 million, has about 150 undergraduate students and 60 graduate students. Under the auspices of the New Jersey Commission on Science and Technology and with several major federal government grants and industry matching support, we are in the process of establishing the New Jersey Center for MicroChemical Systems. Our vision is to become a global leader in developing innovative microkinetic test and design methodologies for rapid microchemical systems development, demonstration, and commercialization in partnership with industry and government for miniature power, on-demand chemical production, and biomedical applications.

We are particularly looking for two additional faculty members to highlight the biomedical engineering dimension of our new research initiative. Ideal candidates will have Ph.D. degrees in biomedical engineering, chemical engineering, or materials science and engineering. The candidates are also expected to teach in the undergraduate biomedical engineering program and to enhance current graduate programs. Consideration of applicants will continue until the positions are filled. Applicants should send curriculum vitae with a plan of research, an educational plan, and be prepared to arrange for three letters of reference to be sent to:

Professor W. Y. Lee, Department Director
Department of Chemical, Biochemical, and Materials Engineering
Stevens Institute of Technology
Castle Point on Hudson
Hoboken, NJ 07030

FACULTY POSITIONS
Department of Genome Sciences
University of Washington

The Department of Genome Sciences at the University of Washington is beginning a major expansion under its new chair, **Dr. Robert Waterston**, and will move into a new building in 2006. Research in the Department encompasses both model organism and human genetics and genomics and includes a strong focus in computational biology and in technology development. The Department invites applications for two faculty positions at the rank of **ASSISTANT PROFESSOR**, although exceptional candidates may be considered at the rank of **ASSOCIATE** or **FULL PROFESSOR.** One position is for an individual who is developing technologies for genomic or proteomic analysis. Contact: **Chair, Technology Search Committee, Department of Genome Sciences, University of Washington, Box 357730, Seattle, WA 98195.**

The other position is for a Scientist working in the area of human genetics. Contact: **Chair, Human Genetics Search Committee, Department of Genome Sciences, University of Washington, Box 357730, Seattle, WA 98195.**

Applicants should hold a Ph.D. or M.D. degree. Candidates should send curriculum vitae, a statement of research and teaching interests, and arrange to have three letters of reference sent. Applications will be reviewed upon receipt until December 1, 2002. For additional information that may be helpful in preparing an application, see the Department's **website: http://www.gs.washington.edu.**

The University of Washington is building a culturally diverse faculty and strongly encourages applications from women and minority candidates. The University of Washington is an Affirmative Action/Equal Opportunity Employer.

MESSIAH COLLEGE

School of Health and Natural Sciences

Department of Natural Sciences

Full-Time, Term-Tenure Track Positions- Available Fall 2003

The Department of Natural Sciences at Messiah College invites applications for the following term-tenure track faculty positions. Successful candidates will be committed to: applying undergraduate science education "best practices"; integrating Christian faith and learning; mentoring undergraduate research; and developing scholarship in an area of discovery, integration, application and/or teaching.

Molecular Genetics

The successful candidate will have expertise and research interests in one or more areas of molecular genetics such as human, developmental, microbial, and/or plant genetics and will be expected to teach advanced level genetic and biotechnology courses, as well as introductory courses for science and non-science majors. Ph.D. or M.D. in Genetics, Molecular Biology or related discipline is required. Demonstrated excellence in teaching, mentoring of student research, and scholarship is preferred. *Contact: Lawrence Mylin, Ph.D., Chair of Molecular Genetics Search Committee. Telephone (717) 766-2511 ext. 3933. E-mail: LMylin@messiah.edu*

Organic Chemistry and Program Head

The successful candidate will be expected to: 1) teach organic chemistry and related courses, and 2) provide academic and administrative leadership to lead the chemistry program to department status (with Department Chair appointment) and ACS approval. Ph.D. in Organic Chemistry is required. Demonstrated excellence in college teaching, mentoring of student research, and scholarship is preferred. *Contact: Jon Melton, Ph.D., Chair of Organic Chemistry Search Committee. Telephone (717) 766-2511 ext. 7051. E-mail: JMelton@messiah.edu*

Vertebrate Ecology

The successful candidate will have secondary expertise in areas such as vertebrate molecular systematics, resource management, urban ecology or restoration ecology and will be expected to teach one or more field-oriented courses in ornithology, herpetology, or mammalogy, as well as courses in areas of secondary interest, introductory and general education science courses. Ph.D. in Vertebrate Ecology required. Demonstrated excellence in college teaching, mentoring of student research, and scholarship is preferred. *Contact: Joseph K. Sheldon, Ph.D., Chair of Vertebrate Ecology Search Committee. Telephone (717) 766-2511 ext. 6650. E-mail: JSheldon@messiah.edu*

Salary and rank for all three positions are commensurate with training and experience. Applicants should submit two copies each of a letter of interest and curriculum vitae to the appropriate Search Committee Chair, **Department of Natural Sciences, Box 3030, Messiah College, Grantham, PA 17027**. Messiah College is a Christian college of the liberal and applied arts and sciences located 12 miles SW of Harrisburg, Pennsylvania. The College is committed to an embracing evangelical spirit rooted in the Anabaptist, Pietist and Wesleyan traditions of the Christian Church. Our mission is to educate men and women toward maturity of intellect, character, and Christian faith in preparation for lives of service, leadership and reconciliation in church and society. Messiah College is a teaching institution that values research and public service. Strong support is given to faculty growth and scholarship. The Department of Natural Sciences, consisting of 16 FTE faculty and over 270 students majoring in biochemistry, biology, chemistry, environmental science, and nutrition and dietetics, is committed to providing premier undergraduate science education programs.

Women and Minorities are Strongly Encouraged to Apply. Messiah College is an Equal Opportunity Employer

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FACULTY POSITION
Assistant/Associate Professor
Department of Pharmacology
University of North Carolina
at Chapel Hill
Live Cell Imaging
of Signal Transduction

The Department of Pharmacology at the University of North Carolina at Chapel Hill invites applications for a tenure-track faculty position at the Assistant or Associate Professor level. Applicants should have a Ph.D., M.D., or M.D./Ph.D. We seek an individual who will establish a dynamic, contemporary research program in the general area of signal transduction. The successful candidate will join a vibrant, collegial department and contribute to the development of a new departmental initiative of live cell imaging. Incoming faculty will be expected to establish a research program supported by extramural funding, participate in our graduate training program and teaching of medical and dental students. Excellent start-up package as well as access to state of the art equipment and core facilities will be provided. Candidates should submit a curriculum vitae, statement of current and future research plans, selected recent publications and names of four references to:

Chair, Faculty Search Committee
Department of Pharmacology
University of North Carolina at Chapel Hill
1106 Mary Ellen Jones, Bldg.
Chapel Hill, North Carolina 27599-7365

Application deadline is **December 15, 2002**.

The University of North Carolina at Chapel Hill is an Equal Opportunity/ADA Employer.

Université d'
University of
Ottawa

Tenure-track Faculty Positions:
Department of Biochemistry, Microbiology and Immunology

The Department of Biochemistry, Microbiology and Immunology invites applications for two to three tenure-track faculty positions. The successful applicants will have the opportunity to collaborate with the current faculty and strengthen work within the areas of infectious disease, structural biology, control of gene expression and signalling mechanisms, and integrated metabolic processes. Applicants at the Assistant Professor level are expected to demonstrate the potential to establish an independent, externally funded research program, while applicants at senior levels should have at least one established, externally funded research program.

The successful applicants are expected to interact in interdisciplinary research with other faculty, direct graduate student research, and instruct undergraduate and graduate courses in Biochemistry, and/or Microbiology and Immunology. Ability to teach in both English and French is an asset. Review of applications will commence immediately and the appointment will start as soon as possible in 2003.

Applications including a CV, a statement of research interests and plans, and the names of three references should be sent by e-mail to the department at **dsheppar@uottawa.ca**. More information on the department can be obtained at **www.uottawa.ca/academic/med/microbio/bmi.**

All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. Equity is a University of Ottawa policy; women, aboriginal people, members of visible minorities and persons with disabilities are invited to apply. All candidates will be considered for Canada Research Chair appointments.

TENURE-TRACK FACULTY POSITIONS
Georgetown University School of Medicine
Department of Pharmacology

The Department of Pharmacology, Georgetown University School of Medicine, is beginning recruitment for tenure-track faculty positions at the rank of **ASSISTANT/ASSOCIATE PROFESSOR**. These positions provide a competitive salary and generous start-up package. We are seeking candidates whose research training is in cardiovascular biology, neurobiology, or other areas of contemporary pharmacology and whose investigative approach emphasizes the use of targeted gene disruption, stem cell biology, transgenic animal models, molecular imaging, or electrophysiology. The Department has national prominence, substantial extramural funding, and a very active graduate training program, which provides for an enriching enrivonment for research collaborations, mentorship, and excellence in teaching.

Applicants should send their curriculum vitae, a statement for their research goals, three reprints, and arrange to have three letters of reference sent to: **Dr. Kenneth L. Dretchen, Chairman, Department of Pharmacology, Georgetown University School of Medicine, 3900 Reservoir Road, N.W., SE 402 Med-Dent Building, Washington, DC 20007. FAX: 202-687-2585; e-mail: dretchek@georgetown.edu**. For more information, visit our **website: http://www.georgetown.edu/departments/pharmacology/index.html**. *Applications are encouraged from women and underrepresented minorities.*

FACULTY POSITION
VASCULAR BIOLOGY

The Vascular Biology Center of Excellence and Department of Pharmacology, University of Tennessee Health Sciences Center, seek applications for a joint **TENURE-TRACK FACULTY POSITION** (rank open) to join an accomplished interdisciplinary community of Vascular Biologists. We are seeking outstanding Ph.D./M.D. Scientists engaged in the broad area of vascular biology research. Applicants whose research interests complement existing strengths in the areas of signal transduction and transcriptional regulation in models of hypertension, atherosclerosis, or diabetes/metabolic disease are encouraged to apply. Please send curriculum vitae, statement of research plans, and the names and addresses of three references to: **Marshall B. Elam, Ph.D., M.D., Professor, Department of Pharmacology and Vascular Biology Center of Excellence, University of Tennessee Health Sciences Center, 874 Union Avenue, Memphis TN 38163. E-mail: melam@utmem.edu**. *The University of Tennessee is an Equal Opportunity Employer/Affirmative Action/Title VI/Title IX/Section 504/Americans With Disabilities Act/Age Discrimination in Employment Act Employer. Women and minorities are encouraged to apply.*

Kolb Endowed Chair, University of Louisville Department of Psychiatry. This is an outstanding opportunity for an experienced Research Psychiatrist at the **ASSOCIATE PROFESSOR** or **PROFESSOR** level with a strong track record of extramural funding. The Department and the University of Louisville are continuing a major expansion of research infrastructure and core laboratory support. There are significant opportunities for research collaboration including existing resources in brain imaging, brain mapping, molecular genetics, molecular biology, neurochemistry, neuroendocrinology, and neuroimmunology. Departmental research emphases at present include areas involving psychosis, mood disorders, children's disorders, geropsychiatry, addictions, psychopharmacology, psychotherapy, and psychooncology. For more information, please contact: **Allan Tasman, M.D., Professor and Chairman, Department of Psychiatry, University of Louisville School of Medicine, Louisville, KY 40292. Telephone: 502-852-1126.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

LANDSCAPE ECOLOGY/
ECOLOGICAL MODELING

Tenure-track position in ecology in the Department of Biology at University of Louisiana at Lafayette with emphasis in spatial analysis of ecological landscapes. Candidates should demonstrate ability to use emerging landscape ecology techniques to study patterns of spatial distribution of organisms and communities (biodiversity), the ecological processes that control these spatial patterns, and changes in both pattern and process over time. In addition, candidates should be able to teach techniques of spatial analysis such as ecological modeling, image processing, remote sensing, geographic information systems, and geostatistics. Research program should support undergraduate program in resource biology and biodiversity, M.S. program in biology, and Ph.D. program in environmental and evolutionary biology. The Department of Biology (**website: http://www.louisiana.edu/Departments/BIOL/**) consists of 30 faculty with research interests ranging from molecular to ecosystem studies with approximately 40 Doctoral and 30 Master's students. Resources available to support research in ecology include Center for Ecology and Environmental Technology, NASA/UL Regional Application Center, Center for Advanced Computer Studies, USGS National Wetlands Research Center, NOAA Estuarine Habitats and Coastal Fisheries Research Center, and Louisiana Universities Marine Consortium (LUMCON). Applicants should submit curriculum vitae; selected reprints; a concise statement of research goals; and names, addresses, e-mail contacts, and telephone numbers of at least three references. A Ph.D. is required for this position. Review of applications will begin 15 December 2002 and continue until the position is filled. Direct application to: **Ecology Search Committee, Department of Biology, University of Louisiana at Lafayette, P.O. Box 42451, Lafayette, LA 70504-2451**. *Affirmative Action/Equal Opportunity Employer.*

CHAIR
Department of Physiology and Biophysics
Howard University College of Medicine

Howard University College of Medicine invites applications and nominations for the position of Chair of the Department of Physiology and Biophysics. The successful candidate should have visibility in the scientific community, an active research program, and a significant record of research achievement including extramural support and is expected to complement and strengthen the existing areas of research in the Department. Evidence of administrative leadership and interpersonal skills as well as a commitment to providing effective medical and graduate education is essential. In addition, the candidate must be sensitive to the institutional mission of the University. Preference will be given to candidates with a research focus in cardiovascular/renal systems, although applicants in other areas of physiology will be given serious consideration. The Chair is expected to foster research interactions with other basic science and clinical departments and to establish a long-term plan to secure a national prominence for the Department. The Department has a specialized neuroscience research program that focuses on neuronal and chemical control of breathing and airway functions; other research foci in the Department include endocrinology, gastrointestinal physiology, electrocardial physiology, and biophysical cytochemistry. The Chair will have the opportunity to recruit additional faculty members to build on the current strengths in the Department.

Applicants should submit detailed curriculum vitae, a statement of administrative philosophy and experience, research goals and teaching interest, and the names and contact information of three references to: **Adrian O. Hosten, M.D., c/o Sterling Lloyd, Associate Dean for Administration, 520 W Street, N.W., Washington, D.C. 20059. Telephone: 202-865-1191; FAX: 202-865-6180.**

Howard University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

TENURE-TRACK FACULTY
POSITION
PLANT BIOLOGIST

The Center for Biosystems Research (CBR; **website: http://www.umbi.umd.edu/~cab/**) has a tenure-track, 100% research faculty position available at the level of **ASSISTANT** or **ASSOCIATE PROFESSOR**. The CBR, one of five research centers of the University of Maryland Biotechnology Institute, is located on the campus of the University of Maryland, College Park. CBR provides a dynamic and interdisciplinary research environment with access to several graduate training programs. Areas of research within CBR emphasize pathobiology (plant and animal), genome sciences, and biomolecular/metabolic engineering. The current position is intended to strengthen the CBR's complement of Plant Scientists; however, other highly qualified candidates with research programs consistent with CBR's research foci will be considered. The successful candidate will be expected to develop an independent, high-quality, and extramurally supported research group with interest and expertise in molecular genetics, genomics, bioinformatics, systems biology, biochemistry, or other areas relevant to modern plant biology. For full consideration, submit current curriculum vitae; selected reprints; summary of research interests; and three reference letters by December 10, 2002, to:

Faculty Search Committee
(Reference Number 300326)
Center for Biosystems Research
University of Maryland
Biotechnology Institute
Plant Sciences Building, Room 5115
College Park, MD 20742

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

ASSISTANT/ASSOCIATE/
FULL PROFESSOR
Biochemistry
Indiana University, Bloomington

The Departments of Biology and Chemistry are holding a joint search with the goal of filling two positions in biochemistry over the next two years at either the Assistant, Associate, or Full Professor level. Successful candidates can choose to have their primary affiliation in either the Biology or Chemistry Department and will also become members of a newly reorganized interdisciplinary biochemistry degree program. Specific information about the Chemistry and Biology Departments can be obtained at **websites: http://www.chem.indiana.edu** and **http://www.bio.indiana.edu** respectively. Information about the interdisciplinary biochemistry program can be obtained at **website: http://www.indiana.edu/~bchem**. Indiana University is undergoing vigorous expansion in biochemistry that includes the construction of a new building. Consequently, we welcome two-career applicants including those partners that may be in other areas of biology, biochemistry, chemistry, or biophysics. Applicants should send curriculum vitae and a letter of intent to: **Biochemistry Search Committee, Interdisciplinary Biochemistry Program, Myers Hall, 915 East Third Street, Indiana University, Bloomington, IN 47405-7107**. Additional information regarding this position can be obtained by contacting: **Carl Bauer, Director of the Interdisciplinary Biochemistry Program; Telephone: 812-855-6595; e-mail: cbauer@bio.indiana.edu**.

Applications will be reviewed as received, and review will continue until the positions are filled. *Indiana University is an Affirmative Action/Equal Opportunity Employer. Women, minority candidates, and couples are encouraged to apply.*

ASSISTANT PROFESSOR OF HUMAN GENETICS

The Department of Human Genetics at the University of Utah School of Medicine is initiating a new, major expansion, recruiting twelve new investigators over the next six years to build upon existing strengths in Human Genetics and Developmental Biology.

We are seeking outstanding applicants at the level of Assistant Professor in the broad fields of Genetics and functional Genomics, including, but not limited to, animal models of human disease and development, genetic approaches to complex diseases, and population genetics/genetic epidemiology. Creative scientists with a record of achievement and commitment to excellence in both research and teaching are encouraged to apply. Successful candidates will receive a substantial start-up package and enjoy a stimulating and supportive research environment.

Applicants should submit curriculum vitae, a summary of research plans, relevant reprints and/or preprints, and 3 letters of reference to:

Dr. Mario R. Capecchi
Co-Chairman, Department of Human Genetics
Howard Hughes Medical Institute
University of Utah School of Medicine
15 North 2030 East, Room 5440
Salt Lake City, UT 84112-5331

THE UNIVERSITY OF UTAH

The application deadline is November 15, 2002.

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

Faculty Positions for 2003
Department of Biochemistry and Molecular Genetics
University of Alabama at Birmingham
Schools of Medicine and Dentistry

Tenure track junior faculty positions and tenured senior faculty positions are available for investigators focused on modern areas of biochemistry and molecular genetics. Areas of special emphasis include, but are not limited to, functional genomics, proteomics, adult and embryonic stem cell reprogramming, chromosome remodeling, and gene regulation in humans and in model organisms. Biochemists and structural biologists interested in protein-protein or protein-nucleic acid interactions are encouraged to apply. Nationally competitive salaries, start-up packages and space allocations will be offered to successful candidates. UAB is a highly interactive environment with strong basic and clinical sciences. Birmingham is a beautiful and affordable city with many cultural attractions. Applicants should send a C.V., a summary of research interests and the names of three references before December 15, 2002 to:

Dr. Tim M. Townes
Chairman, Department of Biochemistry and Molecular Genetics
University of Alabama at Birmingham
Kaul Genetics Building, Room 502
720 20th Street South
Birmingham, AL 35294-0024
Email: ttownes@uab.edu

UAB is an Equal Opportunity/ Affirmative Action Employer

UNIVERSITE DE LAUSANNE

The Faculty of Sciences of the University of Lausanne invites applications for a position of

Assistant Professor «Tenure Track» in experimental microbiology

The candidate must have a solid research background in experimental microbiology, preferably in prokaryotes. The person appointed will join the Institute of Fundamental Microbiology (IMF) to reinforce the fields of biodiversity and environmental microbiology.

The new professor will be involved in teaching microbial biodiversity and physiology.
In case of a successful evaluation, tenure will be at the associates professor level.

Applications including a curriculum vitae, a list of publications, a description of research projects, plus the complete coordinates of 5 reference persons must be sent to the Dean of the Faculty of Sciences, Collège propédeutique, CH-1015 Lausanne before **December 15, 2002**.

Starting date: 1st of September 2003 or as agreed.

Information on scientific environment:
http://www.unil.ch/sc/pages/news/postes.html

Complementary information: Prof. Philippe Moreillon, director of the Institute of Fundamental Microbiology, phone: +41 21 692 56 01; Fax +41 21 692 56 05; Philippe.Moreillon@chuv.hospvd.ch

Candidates of either sex are equally encouraged to apply.

FACULTY POSITIONS
Department of Cell Biology
Yale University School of Medicine

Applications are invited from outstanding candidates for newly created faculty positions in the Department of Cell Biology at Yale Medical School. Although preference will be given to applicants for **ASSISTANT PROFESSOR**, candidates at all ranks will be considered. The Department faculty is undergoing a significant expansion and new faculty will be recruited as part of an interdepartmental consortium aimed at enhancing Yale's longstanding commitment to cell biology. Traditionally strong in the area of membrane traffic, we seek creative faculty with interests in any aspect of basic cell biology. We particularly encourage candidates interested in the interface of cell biology with other areas such as development; immunology; neurobiology; pathogenesis; and human disease, especially cancer and mechanisms of metastasis. Successful candidates will have access to exceptional infrastructural support including facilities for cell and molecular imaging.

Candidates must hold an M.D., Ph.D., or equivalent degree(s). Curriculum vitae together with a statement of current and future research interests (strictly limited to two pages) and up to three representative publications should be submitted by January 15, 2003. The application should include the names of three individuals who have agreed to send recommendation letters directly to us. Please note that the applications should be submitted by e-mail (publications as pdfs), although letters of reference may be sent as hard copy. Applications should be sent by **e-mail: cellbiology@yale.edu**. For all other inquiries, contact:

Mari Kawaguchi, Search Committee Coordinator
Department of Cell Biology
Yale University School of Medicine
333 Cedar Street, P.O. Box 208002
New Haven, CN 06520-8002 U.S.A.
Telephone: 203-785-4320; FAX: 203-785-7446

Yale University is an Equal Opportunity/Affirmative Action Employer.

EARTH SYSTEMS SCIENTIST

Gettysburg College invites applications for a tenure-track **ASSISTANT PROFESSOR** position in Earth systems science in the interdisciplinary Environmental Studies Department to begin fall 2003. A Ph.D. in climatology, geology, hydrology, oceanography, or a related discipline; a strong interest in environmental studies; and a commitment to interdisciplinary teaching in the liberal arts tradition are essential. The College is prepared to assist in establishing a research program involving students including paid pretenure leave. Teaching responsibilities include an introductory nonmajors course and upper-level courses in the specialty area. The successful candidate will play a key role in broadening the scope of the growing Environmental Studies Department (**website: http://www.gettysburg.edu/academics/env/top.html**), which benefits from proximity to policy-making agencies and a variety of terrestrial, freshwater, and marine study sites. It is housed in a new Science Center with outstanding facilities including a GIS laboratory supported by the Arthur Vining Davis Foundations and NSF. Gettysburg College is a highly selective liberal arts college located within 90 minutes of the Washington, D.C./Baltimore, Maryland metropolitan area. Established in 1832, the College has a rich history and is situated on a 22-acre campus with an enrollment of 2,400 students. Send curriculum vitae and statement of teaching and research goals and have three letters of reference (of which at least one can speak to the candidate's teaching effectiveness) sent to: **Dr. John A. Commito, Chair, Environmental Studies Department, Box 2455, Gettysburg College, Gettysburg, PA 17325**. Complete applications received by December 16, 2002, will be afforded full consideration. *Gettysburg College is committed to creating a more diverse campus environment. As part of that process, the College gives strong consideration to candidates from historically underrepresented groups.*

POSITIONS OPEN

University of Nebraska Medical Center

FACULTY POSITIONS
CANCER RESEARCH

The Eppley Institute for Research in Cancer of the University of Nebraska Medical Center (UNMC) is seeking faculty to conduct research in three general areas. These faculty appointments are tenure track with academic rank based on candidates' qualifications.

(1) Basic cancer research: all areas of molecular, cellular, or structural biology related to cancer. (2) Cancer prevention: molecular, genetics, and/or genomics-based approaches to cancer prevention. (3) Tumor immunology: basic or clinical aspects of tumor immunology.

The Eppley Institute is an academic unit of UNMC and a key component of the UNMC Eppley Cancer Center, an NCI-deisgnated cancer center. Both the Eppley Institute and Cancer Center are in a dynamic growth phase. Applicants should possess a Ph.D., M.D., or other terminal degree and appropriate postdoctoral training. Successful applicants will be expected to develop funded laboratory research programs, collaborate with other faculty, and participate in the pre- and postdoctoral training programs of the Eppley Institute including an NCI-funded cancer research training program and a DOD-funded breast cancer training program.

Applicants should indicate which position they are applying for and forward complete curriculum vitae, a three-page description of research accomplishments and future research plans, and a minimum of three letters of reference to: **Dr. Kenneth H. Cowan, Director, Eppley Institute for Research in Cancer, University of Nebraska Medical Center, 986805 Nebraska Medical Center, Omaha, NE 68198-6805**. Review of applications will begin November 1, 2002, and will continue until the positions are filled. See **website: http://www.unmc.edu/Eppley/** for more information. *The University of Nebraska Medical Center is an Equal Opportunity Employer.*

The Department of Biological Sciences invites applications for two tenure-track positions starting fall 2003. Both require a Ph.D. Appointments at the **ASSISTANT PROFESSOR** level are preferred but outstanding candidates with appropriate experience will be considered for appointment at the Associate Professor level. Successful candidates will be expected to develop active research programs involving undergraduates, participate in teaching an introductory course for majors, and teach/develop courses in areas of expertise. They are also expected to participate in activities of the Center for Integrative Natural Science and Mathematics (**website: http://www.cinsam.org/**). Postdoctoral experience preferred but not required. Positions are (1) Plant Systematist to teach plant systematics, general botany, dendrology, and other courses in specialty. Research emphasis is open but preference will be given to individuals with mastery of classical systematics techniques as well as modern biochemical and molecular tools; an added responsibility will be to serve as Curator of a growing herbarium (about 35,000 specimens). (2) Geneticist to teach a basic course in genetics and other courses suitable for undergraduates. Research emphasis is open but preference will be given to individuals with strong background in molecular genetics. Detailed descriptions of each position plus departmental information may be found on the **website: http://www.nku.edu/~biosci/**. Send letter of application; brief statement of professional goals; statements of teaching/research philosophy; curriculum vitae; transcripts; and names, addresses, telephone numbers, and e-mail addresses of three references to: **(Name of Position) Search Committee, Department of Biological Sciences, Northern Kentucky University, Highland Heights, KY 41099**. Screening of application materials will begin on December 16, 2002. *Northern Kentucky University is an Affirmative Action/Equal Opportunity Employer and actively seeks applications from minorities and women.*

POSITIONS OPEN

FACULTY POSITION

The Department of Medical Microbiology and Immunology, University of Wisconsin–Madison, invites applications for a tenure-track position in immunology at the **ASSISTANT PROFESSOR** level. The anticipated starting date for the position is July 1, 2003. The Department currently includes members with active research programs addressing diverse aspects of host/pathogen interactions using a variety of microbial model systems. Madison has been voted one of the most livable cities in the United States, and the University offers a vibrant community of Immunologists and training programs. Applicants must have a Ph.D. and/or M.D. and relevant postdoctoral experience. The successful candidate will be expected to develop an independent research program in immunology and participate in teaching at the undergraduate, graduate, and/or medical student level. For more information, visit our departmental **website: http://www.medmicro.wisc.edu/index.html**. To apply, please send curriculum vitae; three letters of reference from persons knowledgeable of your research and/or teaching abilities; and a statement describing present and future research interests by January 1, 2003 to:

Faculty Search Committee
c/o Patrick Heinritz
Medical Microbiology and Immunology
1300 University Avenue
Madison, WI 53706-1532

University of Wisconsin–Madison is an Equal Opportunity/Affirmative Action Employer. Unless confidentiality is requested in writing, information regarding the names of applicants must be released upon request. Finalists cannot be guaranteed confidentiality.

FACULTY POSITIONS
Pharmacology and Toxicology
Indiana University School of Medicine

The Department of Pharmacology and Toxicology at Indiana University School of Medicine invites applications from individuals for tenure-track **ASSISTANT PROFESSOR** positions. Preference will be given to individuals with outstanding scholarship in the fields of molecular and cellular pharmacology or toxicology but other exceptional candidates will be considered. The successful candidate is expected to establish a competitive, externally funded research program. The position requires a Ph.D. or M.D. and three years of postdoctoral experience. Individuals interested in the Assistant Professor position in the Department of Pharmacology and Toxicology should send curriculum vitae, a statement of their past research contributions and future plans, and the names of three to five references to: **Dr. Grant Nicol, Pharmacology and Toxicology Search Committee, Department of Pharmacology and Toxicology, 635 Barnhill Drive, Indiana University School of Medicine, Indianapolis, IN 46202.** *Indiana University is an Equal Employment Opportunity/Affirmative Action Employer; Minorities/Females/Disabled.*

TWO FACULTY POSITIONS
PHYSIOLOGY/NEUROBIOLOGY

The Department of Biological Sciences at Marquette University has two tenure-track **ASSISTANT PROFESSOR** positions available August 16, 2003, for Ph.D.s with postdoctoral experience. The successful applicants are expected to develop extramurally funded research programs and to teach at the undergraduate and graduate levels. Annually, each successful applicant will teach an undergraduate laboratory course in neurobiology or physiology in one semester and a graduate lecture course or seminar course in the applicant's area of expertise in the other semester. Research utilizing cellular and/or molecular approaches is desired (**website: http://biology.marquette.edu**). Send curriculum vitae; statements on research and teaching; and three letters of reference by December 1, 2002, to: **Dr. Brian Unsworth, Chair, Department of Biological Sciences, WLS 112B, P.O. Box 1881, Milwaukee, WI 53201-1881.**

Faculty Position in Cell Biology UCSF

The Department of Physiology and the Program in Biological Sciences at the University of California San Francisco (UCSF) seek an assistant or associate professor, tenure track, taking cellular, molecular, genetic, or other novel experimental or theoretical approaches to the biology of cells or systems. A successful applicant will be expected to mount an exciting research program to participate in graduate and postdoctoral training, and to teach in graduate and professional school courses. The search will remain open until an appointment is made, but complete applications should be received by **November 15, 2002**, to ensure full consideration. Please send a curriculum vitae, reprints of one or two key publications, a two-page summary of past research and future goals, and have three letters of recommendation sent to:

Dr. Holly Ingraham
Chair, Search Committee
c/o Janet Williams
Department of Physiology Box 0444
University of California San Francisco
513 Parnassus Avenue
San Francisco, CA 94143-0444

UCSF is an Affirmative Action/Equal Opportunity Employer. The University undertakes affirmative action to assure equal employment opportunity for underutilized minorities and women, for persons with disabilities, and for Vietnam-era veterans and special disabled veterans.

The University of Missouri - St. Louis and The Donald Danforth Plant Science Center Search for the E. Desmond Lee and Family Fund Endowed Professorship in Plant Sciences

DONALD DANFORTH PLANT SCIENCE CENTER

The University of Missouri-St. Louis announces a search for the E. Desmond Lee and Family Fund Professorship in Plant Sciences, a position created to enhance the partnership between the University and the Donald Danforth Plant Science Center, an independent research institution. The E. Desmond Lee Professor will be a faculty member in the University's Department of Biology, with comparable status at the Danforth Center. The position offers a competitive salary, set-up funding, and funds renewed annually from the endowment to support programs of mutual interest to the Department and the Danforth Center, including the candidate's research.

Candidates should merit appointment as Associate Professor or Professor. Although preference will be given to senior candidates, junior candidates on trajectory to an outstanding career will be seriously considered. The successful candidate is expected to be an excellent scientist, pursuing biochemical, molecular or structural research in a plant system, with an active research program attracting significant external funding. Research areas of interest are those that complement current work at both UM-St. Louis (**http://www.umsl.edu/~biology/**) and the Danforth Center (**http://www.danforthcenter.org/**).

The Danforth Center and the University are committed to excellence in research combined with global outreach efforts. The Department of Biology has a graduate program – including a joint program in biochemistry with the Department of Chemistry and Biochemistry (**http://www.umsl.edu/~chem/**) - that attracts scholars from around the world.

Application review begins immediately; the position will remain open until filled. Applications should include a cover letter outlining qualifications and interests, curriculum vitae, a statement of research interests and goals, and the names and addresses of five references. Please send applications via email to **Maryann Hempen, mhempen@jinx.umsl.edu**. In addition, please send copies of two significant papers to: **Plant Sciences Search Committee, Department of Biology, University of Missouri-St. Louis, 8001 Natural Bridge Rd., St. Louis, MO 63121**.

The University of Missouri-St. Louis is an Affirmative Action, Equal Opportunity Employer committed to excellence through diversity.

Developmental Biology Faculty Position Assistant or Associate Professor Brown University Division of Biology and Medicine

The Department of Molecular Biology, Cell Biology and Biochemistry at Brown University (**http://www.brown.edu/Department/Molecular_Biology/**) announces the opening of a tenure track position in Developmental Biology to be appointed July 1, 2003. The appointment may be made at the level of Assistant or Associate Professor depending on the qualifications of the candidate selected.

Qualifications include a Ph.D. or M.D. degree and a demonstrated track record of excellence in research. The applicant will be expected to pursue an independent, vigorous, externally funded research program in developmental biology of multicellular organisms, and to be an active member of the NIH-funded predoctoral training program in Molecular Biology, Cell Biology and Biochemistry. The applicant will also be expected to participate in graduate and undergraduate teaching.

The Search Committee will give full consideration to applications received by December 1, 2002 that include a curriculum vitae, description of research interests, and at least three letters of reference (or 5 letters for senior applicants). Application materials should be sent to: **Dr. Gary M. Wessel, Developmental Biology Search Committee Chair, c/o Mary Martino, Department of Molecular Biology, Cell Biology and Biochemistry, Brown University, Box G-J115, Providence, RI 02912**. Letters of reference should be sent under separate cover to the same address.

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

Assistant/Associate Professor - Zebrafish

Vanderbilt University has recently committed substantial resources toward expanding interdisciplinary efforts utilizing zebrafish to address significant problems in biology. This expansion includes construction of a large, state-of-the-art aquatic facility, development of a central genomics facility and substantial investments in other facilities for performing genetic manipulation and phenotype analysis in zebrafish. We are now seeking candidates to fill faculty positions at either the Assistant or Associate Professor levels in several University departments including Biological Sciences, Pharmacology, Cell and Developmental Biology, Medicine and Pediatrics. Opportunities for affiliations with one or more NIH-funded research centers also exist. Successful candidates will be provided laboratory space and generous start-up funds to initiate their independent research programs in a collegial and collaborative scientific environment.

Candidates should have Ph.D., M.D./Ph.D. or M.D. degrees and significant prior research experience. We are especially interested in candidates using zebrafish to 1) investigate molecular genetic mechanisms of organogenesis, especially that of cardiovascular, hematopoietic, gastrointestinal, renal and central nervous systems, 2) investigate mechanisms of disease, 3) develop novel or high throughput genetic screening methods and 4) develop methods of computational genomics.

Interested candidates should submit a current C.V., summary of research experience and future plans, and names and addresses of three references to:

Zebrafish Faculty Selection Committee
Division of Genetic Medicine, 529 Light Hall
Vanderbilt University
Nashville, TN 37232-0275
Tel: 615-936-2660; Fax: 615-936-2661
zebrafish@vanderbilt.edu

Vanderbilt University is an equal opportunity and affirmative action employer

POSITIONS OPEN

FACULTY POSITION
Department of Molecular Biology
Princeton University

The Department of Molecular Biology at Princeton University invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. We are seeking an outstanding Investigator in the regulation of cell growth but will give special consideration to applicants with background and interests in genomewide expression studies of human or animal tissues and/or cells in culture. In addition to an appointment in the Department of Molecular Biology, the successful candidate will be eligible for an appointment in the Lewis-Sigler Institute for Integrative Genomics. The Department has extensive facilities that include high-level computing, confocal and electron microscopy, FACS, DNA array technology, mass spectrometry, oligonucleotide/peptide synthesis, and a transgenic mouse facility. Ph.D.s or M.D.s with postdoctoral research experience should send curriculum vitae, short summary of research interests, and three letters of reference to: **Search Committee, c/o Shelley Winslow, Department of Molecular Biology, Princeton University, Princeton, NJ 08544-1014**. For full consideration, applications should be received by January 1, 2003. For additional information about the Department, visit our **website: http://www.molbio.princeton.edu**. *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGY FACULTY POSITION

The University of Redlands invites applications for a **TENURE-TRACK POSITION** in biology. We seek to broaden our existing offering in animal biology at the systems level. The successful candidate will teach both nonmajors and majors as well as involve undergraduates in research. Areas of expertise might include but are not limited to invertebrate zoology, systems physiology, neurobiology, parasitology, and entomology. A Ph.D. (by September 2003), evidence of excellence in undergraduate teaching, and a commitment to undergraduate research are required. Please send letter of application, curriculum vitae, a description of research plans, a statement providing for philosophy of teaching with a list of potential course offerings, and arrange for three letters of recommendation to be sent to: **Chair, Search Committee, Department of Biology, University of Redlands, P.O. Box 3080, Redlands, CA 92373-0999**. Applications received by November 21, 2002, are assured full consideration. Located in an ethnically and culturally diverse region midway between Los Angeles and Palm Springs, California, the University of Redlands (**website: http://www.redlands.edu**) is a private, selective, liberal arts university enrolling approximately 2,200 undergraduates in the residential College of Arts and Sciences. *The University of Redlands is an Equal Opportunity Employer. We actively seek applications from members of underrepresented populations.*

FACULTY POSITIONS
California State San Marcos

The Department of Biological Sciences invites applications for three tenure-track **ASSISTANT PROFESSOR** positions to begin fall 2003: (1) Physiologist, (2) Molecular Biologist/Virologist, and (3) Developmental Biologist. All positions require a Ph.D. in the biological sciences; postdoctoral experience is preferred. Successful candidates will develop and teach upper-division courses in their areas of expertise and contribute to some of the following: introductory biology, required core courses, graduate courses, and appropriate courses in general education. Applicants should have the demonstrated ability or potential to effectively instruct undergraduate and graduate students; establish community partnerships; and develop an active, independent research program with undergraduate and graduate students. For details and application instructions, see: **website: http://www.csusm.edu/A_S/FacSearches**. Screening of applications will begin November 2002. *CSU San Marcos is an Affirmative Action/Equal Opportunity/Title IX Employer.*

THE OHIO STATE UNIVERSITY

The Division of Pharmaceutics invites applications for two tenure-track **ASSISTANT** or **ASSOCIATE PROFESSOR** positions. Applicants with research interests that utilize molecular approaches to the study of drug delivery or drug disposition are preferred. Applicants with research interests in the areas of pharmacogenomics or proteomics are also encouraged to apply. The Division consists of nine faculty and 40 Doctoral students with research focus in pharmacokinetics/pharmacodynamics, molecular pharmacology, and drug delivery. Division faculty provide leadership and resources in the mass spectrometry laboratory, the pharmacogenomics program, the bioinformatics and computational biology facility, and clinical collaborations within the comprehensive cancer center. Detailed information can be obtained at **website: http://www.pharmacy.ohio-state.edu/homepage/program/ceut/index.htm**.

Ohio State is a comprehensive research university that offers an outstanding research environment for basic and clinical sciences. The College of Pharmacy has state-of-the-art research and library facilities and is part of a medical center complex that includes a cancer hospital and research institute, a comprehensive cancer center, a heart and lung research institute, and a retrovirus center. Other shared university facilities include a supercomputer center, genomics facilities, and a campus chemical instrumentation center.

A letter of application along with curriculum vitae, the names and addresses of three references, and a statement of research interests and professional goals should be sent to:

James T. Dalton, Chair
Division of Pharmaceutics
College of Pharmacy
The Ohio State University
500 West 12th Avenue
Columbus, OH 43210-1291
Telephone: 614-688-3797
E-mail: dalton.1@osu.edu

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

FACULTY POSITION
Plant Molecular Genetics

The Section of Molecular Cell and Developmental Biology at the University of Texas at Austin invites applications for a tenure-track position in plant molecular genetics. We are especially interested in applicants who use molecular genetic approaches to investigate important problems in plant cell and developmental biology. We will consider applications at all ranks; however, we prefer to fill this position at the **ASSISTANT PROFESSOR** level. The successful candidate will also be eligible for affiliation with the Institute for Cellular and Molecular Biology, which provides state-of-the-art facilities and supports an excellent graduate program. The molecular biology community at UT Austin is in an exciting growth phase with recent hires in cell biology, developmental biology, genomics, and related areas. Applications will be considered from 1 November 2002 until a suitable candidate is selected. Applicants should send their curriculum vitae, statement of research and teaching interests, representative publications, and the names and contact information of at least three reviewers to:

Dr. Stan Roux
Chairman, Search Committee
Section of Molecular Cell and Developmental Biology
The University of Texas
BIO 311, 205W 24th Street
1 University Station A6700
Austin, TX 78712-0183
Websites: http://www.biosci.utexas.edu/MCDB/ and
http://www.icmb.utexas.edu/

The University of Texas at Austin is an Equal Opportunity Employer. Qualified women and minorities are encouraged to apply.

FACULTY POSITION
Plant Biotechnology

The Department of Agronomy at the University of Kentucky invites applications for a faculty position in plant biotechnology. Possible areas of research include but are not limited to functional genomics, characterization and manipulation of natural product metabolism in plants, transgene dynamics, and comparative aspects of genome structure and function. For more information about the expectations for this position, see **website: http://www.uky.edu/Agriculture/Agronomy/PlantPhys/KTRDC/position.html**. Applications will be accepted until November 15, 2002, or until a suitable candidate is selected. Anticipated starting date is on or before July 1, 2003. To apply, send curriculum vitae, transcripts (photocopies acceptable), a statement of research interests and teaching philosophy, and the names and addresses of three references to: **Dr. Michael Barrett, Chair, Department of Agronomy, University of Kentucky, Lexington, KY 40546-0091.Telephone: 859-257-7310; FAX: 859-257-2185; e-mail: mbarrett@ukv.edu.**

The University of Kentucky is an Equal Opportunity Employer. Applications will be accepted without regard to race, color, age, sex, religion, disability, or national origin. The address of the College of Agriculture Equal Employment Opportunity Coordinator is Room S−101, Agriculture Science Center North, Lexington, KY 40546-0091.

MARINE SCIENTIST

Coastal Carolina University invites applications for a tenure-track **ASSISTANT PROFESSOR** position in the Department of Marine Science. Applicants must have a Ph.D. in marine science or related discipline, excellent communication skills, demonstrated instructional abilities, and a strong commitment to undergraduate education. We particularly seek applicants with physical oceanography research specialties that include hydrodynamics and near-shore coastal ocean processes. The successful candidate will be expected to teach our core physical oceanography course, develop upper-division and graduate courses consistent with the new coastal marine and wetlands study M.S. program, and develop a successful research program involving both undergraduate and graduate students. Review of applications will begin November 1, 2002, and continue until the position is filled. Please send curriculum vitae, statement of teaching and research expertise, selected reprints, and three letters of recommendation to: **Chair, Coastal Carolina University, Department of Marine Science, P.O. Box 261954, Conway, SC 29528-6054**. For further information about CCU and Marine Science, visit **website: http://kingfish.coastal.edu/marine**.

Coastal Carolina University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION
Vertebrate Genetics

Applications are invited for a **TENURE-TRACK POSITION** in vertebrate genetics in the Department of Molecular Genetics and Microbiology and the Center for Experimental Genetics at Duke University Medical Center. We are particularly interested in individuals that utilize the mouse for the development of models of human disease. The facilities and start-up support provided by the Department are excellent and the development of programs in many departments of the Medical center affords a rich environment for scientific interactions.

Applications should include curriculum vitae, a brief description of research accomplishments, a description of plans for future research, and the names of the three individuals that can serve as references. The deadline for receipt of applications is December 31, 2002. Address applications to: **Genetics Search Committee, Department of Molecular Genetics and Microbiology, Duke University Medical Center, Box 3175, Durham, NC 27710**. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

Chair, Department of Bioengineering, Clemson University

The Department of Bioengineering at Clemson University is seeking a dynamic individual to be its next Department Chair. Clemson's Bioengineering Department has been at the forefront of bioengineering innovation in the area of biomaterials for over 30 years, is one of the fastest growing bioengineering departments in the nation, and currently has over $5.5M in research funding. It is a graduate-only department and currently has 60 graduate students and 17 post-docs. The ideal Chair will provide: • Leadership and vision to elevate the department to greater national prominence in graduate education and research, • Excellence in leadership, research, and teaching at the graduate level, • Stimulus to maintain research and sponsored programs at $350K per year per faculty, • Advocacy for the department at the University and at the national/international level.

The candidate must possess an earned Ph.D. in Bioengineering or a closely related field, or an M.D. and be nationally recognized as a leader in biomedical engineering with a strong record of research, external funding, teaching at the graduate level and experience in a multidisciplinary environment.

This is an opportunity to join a dynamic, young faculty at the cutting edge of bioengineering, at a university where collaboration with other departments is encouraged and common. The department has 9 full-time faculty members and a multidisciplinary staff of 14, with backgrounds from neuroscience to bioengineering to chemistry (see **www.clemson.edu/bioechair**). In addition, the department has recently filled 2 new tenure track faculty positions, and 2 additional positions at Clemson will be filled that will coordinate with four new positions at the new department extension at the Medical University of South Carolina in Charleston, S. C.

Clemson is the Land Grant University of South Carolina and is located in the beautiful Piedmont section of South Carolina and is known for its quality of life, outdoor recreation, and low cost of housing and living. Clemson is near several major metropolitan areas and 40 minutes from a major airport. Inquiries should include a statement of interest, a resume, four references, and should be sent to: **Chair, Search Committee, Department of Bioengineering, Clemson University, 501 Rhodes Research Center, Clemson, SC 29634-0905.** The review process will begin on November 15, 2002, and will continue until the position is filled. Electronic submission of applications is encouraged, at **msherri@clemson.edu**. *Clemson University is an Equal Opportunity/Affirmative Action Employer and encourages applications from underrepresented groups, including minorities and women.*

Assistant/Associate Professor

Department of Neurobiology
Harvard Medical School

The Department of Neurobiology at Harvard Medical School invites applicants for the position of Assistant/Associate Professor. Preference will be given to candidates who study neural circuits with innovative approaches, including optical imaging, MRI, molecular biology, or electrophysiology. We have recently established a Brain Imaging Core with facilities for small-animal MRI, optical imaging, and single and multi-photon confocal microscopy. This tenure track position offers outstanding scholarly and scientific resources in a collegial and collaborative atmosphere that includes strong ties to related departments throughout Harvard, its affiliated hospitals, and the Boston neuroscience community. The position also offers the opportunity to teach exceptional graduate, medical, and health-science-technology students with strong interests in neuroscience and related technologies. Candidates must have a Ph.D., M.D., or equivalent graduate degree.

Applicants should send a letter of application with a curriculum vitae, a brief description of research interests, and the names of at least three references. They should also arrange for those references to send letters of recommendation directly. Applications should be received by December 2, 2002, and should be addressed to:

Neural Circuits Search Committee, c/o Ms. Amy Webber
Department of Neurobiology
Harvard Medical School
220 Longwood Avenue
Boston, MA 02115

Harvard Medical School is an Equal Opportunity/Affirmative Action Employer with an institutional commitment to diversity in its faculty.

Penn
University of Pennsylvania

Faculty Positions
Department of Biology
University of Pennsylvania

The Department of Biology wishes to recruit one tenure-track faculty member in each of the following areas:

Cell Biology: We seek a colleague employing state-of-the-art methods to study fundamental problems in any area of cell biology, using any experimental system (animal, fungal, plant, microbial). Possible areas of interest include: signal transduction, sub-cellular structure/trafficking, motility/cytoskeletal dynamics, cell cycle regulation, development/differentiation, cell-cell or host-pathogen interactions.

Systems Biology: We seek a colleague utilizing 'systems' approaches for studies of molecular, cellular, physiological, neural and/or ecological processes. In particular, individuals with a deep interest in genomic scale analysis of transcription, protein expression, protein-protein interactions, metabolic pathways, and/or organismal interactions, using experimental and/or theoretical/computational techniques, are encouraged to apply. This appointment will likely include affiliation with other departments, including the Center for Bioinformatics, and/or the University of Pennsylvania Genomics Institute as appropriate.

We are expecting to make these appointments at the Assistant Professor level but will give serious consideration to applications from truly outstanding individuals who would expect to be appointed at a more senior level. Applicants are expected to have demonstrated excellence and productivity in research, and a desire to participate in teaching at both the undergraduate and graduate level. Applicants should send a CV, description of research interests, and up to 3 reprints to: **Cell Biology or Systems Biology Search, Department of Biology, University of Pennsylvania, Philadelphia PA 19104-6018.**

Applicants for the Assistant Professor level positions should also arrange to have 3 letters of reference sent to the appropriate search committee. Review of applications will begin December 1, 2002. Further information on the department can be found on-line at **http://www.bio.upenn.edu/**.

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

University of Pennsylvania

Faculty Positions

Leonard and Madlyn
Abramson Family Cancer Research Institute
at the University of Pennsylvania

The University of Pennsylvania seeks outstanding candidates for tenure-track faculty positions in the recently created Abramson Family Cancer Research Institute, which is an integral part of the University of Pennsylvania Abramson Cancer Center and the School of Medicine. Faculty appointment will be Assistant, Associate or Full Professor in an appropriate department in the School of Medicine. Rank will be commensurate with experience. Applicants must have an MD and /or PhD degree.

Candidates who have scientific interests and experience in any field of cancer biology, including, but not limited to cell cycle control, tumor suppressor genes, oncogenes, cancer genetics, signal transduction, angiogenesis, apoptosis, and translational research, should send a letter of interest, curriculum vitae and the names of references to:

Craig Thompson, M.D.
Scientific Director
The Abramson Family
Cancer Research Institute
4th Floor – BRB II/III
421 Curie Blvd.
Philadelphia, PA 19104

www.uphs.upenn.edu/abramson

Leonard & Madlyn ABRAMSON family
CANCER RESEARCH INSTITUTE
at the University of Pennsylvania Cancer Center

The University of Pennsylvania is an equal opportunity/affirmative action Employer. Women and minority candidates are strongly encouraged to apply.

FACULTY POSITIONS IN BIOLOGY

The Department of Biology at the University of South Florida (USF) announces two tenure-track positions at the **ASSISTANT PROFESSOR** level to begin in August 2003. Developmental Biologist: Research interests should be in the general area of developmental biology utilizing cellular, molecular, and/or genetic approaches. We especially encourage applicants whose interests complement departmental strengths in marine biology, evolution, and/or gene regulation and cell signaling. Environmental Molecular Biologist: A strong background in molecular biology is required as well as research interests that focus on fundamental problems related to the interaction of organisms with their environment. We especially encourage applicants whose interests complement departmental strengths in marine biology, cell and molecular biology, and conservation biology. Responsibilities for both positions include establishment of a productive, externally funded research program and teaching undergraduate and graduate courses in the area of specialization. USF is rated a Carnegie Research Extensive University and the Department of Biology has an active Ph.D. program within which each candidate is expected to participate. In addition to departmental faculty, collaborative opportunities exist within the USF Colleges of Marine Sciences and Medicine and also the Moffitt Cancer Center. Candidates must have a Ph.D. in biological sciences or related field, postdoctoral experience, and evidence of research productivity. Send curriculum vitae, reprints of at least two published papers, statements of research and teaching interests, and three letters of reference to the appropriate Search Committee Chair at: **Department of Biology, University of South Florida, 4202 East Fowler Avenue, SCA 110, Tampa, FL 33620-5200. Website: http://www.cas.usf.edu/biology**. Complete applications (including letters) must be received by November 27, 2002. *The University of South Florida is an Affirmative Action/Equal Access/Equal Opportunity Employer. Applications from women and minorities are encouraged. According to Florida law, applications and meetings regarding them are open to the public. For disability accommodations, please Telephone: 813-974-3250 for assistance.*

FACULTY POSITION
Molecular Geneticist

The Department of Cell Biology and Molecular Genetics at the University of Maryland, College Park, is seeking a Molecular Geneticist who is working on a fundamental problem in biology by using a model plant, algal, or microbial system and the tools of comparative genomics. All applicants should hold a Ph.D. with relevant postdoctoral experience. The appointment will be made at the **ASSISTANT, ASSOCIATE,** or **FULL PROFESSOR** level depending on research experience and professional stature. The successful applicant is expected to establish an innovative research program with sustained extramural funding that will complement existing areas of research emphasis in the Department. Ample opportunities for research collaboration exist in the Department, the University of Maryland Biotechnology Institute, and the nascent University of Maryland Center for Bioinformatics and Computational Biology as well as with NIH, TIGR, and USDA, all within the Washington, D.C. area. All faculty members are expected to participate in undergraduate and graduate education. Additional information about the Department can be found at **website: http://www.life.umd.edu/CBMG**. Application materials including a cover letter, curriculum vitae, selected reprints, statement of research and teaching interests, and the names of four references should be sent by 4 December 2002 to: **Dr. Todd Cooke, Search Committee Chair, Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD 20742**. *The University of Maryland is an Affirmative Action/Equal Opportunity Employer; women and members of underrepresented groups are especially encouraged to apply.*

POSITIONS OPEN

FACULTY POSITION
Department of Mechanical Engineering
Stanford University

The Department of Mechanical Engineering at Stanford University invites applicants for a tenure-track faculty position at the junior level (**ASSISTANT** or **UNTENURED ASSOCIATE PROFESSOR**) in the broadly defined area of mechanics. We are searching for an energetic and visionary individual in any area of mechanics but we are especially interested in the following: multiscale modeling and simulation with application to materials, devices, or biological systems; nano- and microscale mechanics; computational and solid mechanics.

Applicants must hold a Doctorate in an appropriate field and must have demonstrated an ability to carry out outstanding research and have a strong record of or promise for exceptional teaching. Appointment will be at a rank commensurate with the applicant's experience. Applicants should send curriculum vitae, a brief statement of their interests that includes their vision for their research area and teaching, copies of one or two publications, and complete contact information for at least five references to the following address:

Professor Peter M. Pinsky
Department of Mechanical Engineering
275 Durand Building, 496 Lomita Mall
Stanford University
Stanford, CA 94305-4040

Applications are requested by November 30, 2002, but will continue to be accepted until the position is filled. *Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.*

FACULTY POSITION
DRUG DESIGN AND DISCOVERY

The Division of Pharmaceutical Sciences at the University of Kentucky College of Pharmacy has a **TENURE-TRACK POSITION** available at any academic rank in the application of molecular modeling/computational chemistry to problems in drug design and discovery. Candidates should possess a Ph.D. degree and postdoctoral experience in medicinal chemistry, chemistry or biochemistry, or experience at the chemistry/biology interface and a commitment to interdisciplinary research in the pharmaceutical sciences. A pharmacy background is preferable. The selected candidate will be expected to develop a competitive, extramurally supported research and graduate training program and will have the ability and commitment to contribute to the professional and graduate education activities in the College. Please send your application letter, curriculum vitae, a proposed research program, and names and telephone numbers of three references to: **Dr. Daniel Tai, Division of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington, KY 405336-0082. E-mail: htai1@uky.edu**. See our website for a full description; **website: http://www.uky.edu/Pharmacy/employment.html**. Application review will continue until the position is filled. *An Equal Opportunity Employer.*

GRAND CANYON UNIVERSITY. The Department of Biology seeks a broadly trained Geneticist for a tenure-track **ASSISTANT PROFESSOR** position beginning August 2003. Ph.D. and strong commitment to undergraduate teaching required. Teaching duties include general genetics and molecular genetics courses with opportunities to develop other courses within the individual's field. Expertise in development or botany is helpful but not required. Grand Canyon University is a private, independent, Christian liberal arts institution located in Phoenix, Arizona. Send letter, curriculum vitae, statement of teaching interests and scholarly plans, completed GCU application (download at **website: http://www.grand-canyon.edu/personnel/fac.htm**), and three letters of recommendation to: **Dr. Leanna Hall, Vice President for Academic Affairs, Grand Canyon University, 3300 West Camelback Road, Phoenix, AZ 85017**. Review of applications will begin 1 November 2002. *Equal Opportunity Employer.*

POSITIONS OPEN

PROFESSOR AND HEAD
Department of Biochemistry and Molecular Biology
Louisiana State University Health Sciences Center School of Medicine, New Orleans

Louisiana State University Health Sciences Center School of Medicine in downtown New Orleans invites applications and nominations for Professor and Head of the Department of Biochemistry and Molecular Biology.

The School is presently undergoing a period of extraordinary expansion, with unprecedented investments by the state of Louisiana in the development of biomedical sciences and in the collaboration between LSU and Tulane Health Sciences Centers, which are building collaborative research programs, most notably in genetics and cancer. More than $11 million dollars in new and recurring funding was appropriated this year to build and operate core laboratories and develop collaborative programs in cancer research.

Additional funds have been appropriated to build and operate core laboratories, and a Good Manufacturing Practices (GMP) facility in New Orleans, Louisiana, in support of a collaborative gene therapy program. It is our intent to use these and other resources to become one of the top 10 cancer research centers in the United States within 10 years.

The successful applicant will be internationally recognized for research in molecular biology with an emphasis in cancer and will have a record of exceptional levels of funding from the NCI for his or her own research, for the development of program project grants and training programs, and for translational research.

Candidates should provide curriculum vitae including a full list of publications; past and current research support; and a brief statement of educational, research, service, and administrative interests. These materials should be forwarded electronically to:

Dr. Wayne L. Backes
LSUHSC School of Medicine
Stanley S. Scott Cancer Center
533 Bolivar Street
New Orleans, LA 70112
E-mail: molecular-biology-search@lsuhsc.edu

LSUHSC is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS
The University of Texas Health Science Center at Tyler

The Biomedical Research Departments at The University of Texas Health Science Center at Tyler are expanding their research programs by hiring additional state-funded faculty at all ranks. The Center's mission focuses on basic and clinical research on heart and lung diseases. Current recruiting efforts are directed towards individuals with a track record of basic science research in tobacco-related, infectious, or environmental-related diseases of the lung and inflammatory cell biology. Preference will be given to candidates with a history of external funding. Teaching requirements are minimal. Tyler is situated approximately 100 miles east of the Dallas/Fort Worth metroplex. More information about the Institution and the city can be obtained at **website: http://www.uthct.edu**.

Interested candidates should submit current curriculum vitae, a future research plan, and the names and addresses of three references to: **Dr. Mark A. L. Atkinson, Director of Research, University of Texas Health Science Center at Tyler, 11937 U.S. Highway 271, Tyler, TX 75708-3154. E-mail: mark.atkinson@uthct.edu**. *This position is security sensitive and subject to Texas Education Code 51.215, which authorizes the employer to obtain criminal history information. Equal Employment Opportunity/Affirmative Action Employer; Minorities/Females/Veterans/Disabled. Applications are strongly encouraged from minorities and women.*

FACULTY POSITION
ASSISTANT/ASSOCIATE PROFESSOR

The multidisciplinary Program in Cell Biology at National Jewish Medical and Research Center invites applications for a faculty position at the Assistant or Associate Professor level. The successful candidate will be expected to develop a program of research relevant to the broad areas of inflammation, immunology or lung cell biology. Specific areas could include, but are not limited to: extracellular connective tissue matrix, pattern recognition molecules, motility, endocytosis or membrane traffic, signal transduction, lung epithelial cell biology, and innate and mucosal immunity. Candidates should have a Ph.D. or M.D. degree and at least three years of post-doctoral experience. All faculty members in the Program in Cell Biology have joint appointments at the University of Colorado Health Sciences Center.
Please send curriculum vitae, a statement of research interests and the names of three references to:

National Jewish Medical
and Research Center
Dr. David Riches, Chair Search Committee
Program in Cell Biology
1400 Jackson St.
Denver, CO 80206
richesd@njc.org
AA/EOE

NATIONAL JEWISH Medical and Research Center

Faculty Positions
The Department of Biomedical Sciences, Grand Valley State University, Allendale, Michigan

Clinical/Diagnostic Microbiology - Assistant/Associate Professor. A Ph.D. and clinical experience are required. The successful candidate will be expected to teach a variety of undergraduate and graduate courses in the area of microbiology and public health. Research with undergraduates is expected.

Anatomy - Assistant/Associate Professor. A Ph.D. in anatomy and demonstrated teaching experience at the post-doctoral level in anatomy and human cadaver labs required. The successful candidate will be expected to teach in a variety of anatomy courses and laboratories as well as develop courses in his/her area of expertise.

Physiology - Assistant/Associate Professor. A Ph.D. in physiology, pharmacology or related field and demonstrated research experience at the post-doctoral are required. The successful candidate will be expected to teach a variety of courses in physiology and/or pharmacology. Research with undergraduates is expected.

Nutrition - Assistant/Associate Professor. A Ph.D. and/or R.D. required. The successful candidate will have expertise in dietetics, nutrition epidemiology, public health nutrition or nutrition education and be able to develop a research program involving undergraduates. The successful candidate will teach in a variety of nutrition courses.

Chair - Associate/Full Professor. A Ph.D. or M.D. with proven leadership and administrative experience are required. The successful candidate will have demonstrated capability for collaboration on an interdepartmental level with biologically/health related programs and will be committed to a balance between teaching and research at the undergraduate and graduate levels. This appointment is scheduled to begin July 1, 2003.

Interested candidates should submit a letter of intent for the appropriate position describing their teaching philosophy and research interests, a current curriculum vitae and the names of three references to **Search Committee, Department of Biomedical Sciences, Grand Valley State University, Allendale, MI 49401**. E-mail questions to **hackerm@gvsu.edu**. The review process will begin on November 15, 2002 and continue until the positions are filled.

Grand Valley State University is an Affirmative Action, Equal Employment institution.

University of California, Santa Cruz

UC SANTA CRUZ

The Center for Biomolecular Science and Engineering (CBSE) and the **Division of Natural Sciences at UC Santa Cruz** invite applications for 3 faculty positions at the Assistant Professor level for Fall 2003. Candidates should have outstanding research records demonstrating interdisciplinary approaches and the application of new technologies to important problems in biology, biochemistry and environmental health, and a willingness to participate in our academic programs. For complete descriptions and application instructions, please refer to the individual web page listed with each position.

PROTEOMICS (#631-03): Department of Chemistry and Biochemistry. Innovative research at the interface of chemistry and biology. Areas of research could include proteomics using array technologies and mass spectrometry, rapid throughput techniques for proteome analysis and protein expression, rapid structural and/or functional analysis of protein libraries, analysis of protein-protein interactions and structural/computational modeling; **http://chemistry.ucsc.edu/jobs.html**

ENVIRONMENTAL TOXICOLOGY (#565-03): Department of Environmental Toxicology. Research on organic contaminants that seeks to understand the fundamental mechanisms underlying the transport and/or fate of organic contaminants in the environment; or the biochemical and molecular mechanisms underlying the metabolic fate and toxicity of organic contaminants to organisms in aquatic, terrestrial, or laboratory/model systems; **http://www.etox.ucsc.edu/employment/organics.html**

BIOINFORMATICS (#589): Baskin School of Engineering. Areas include comparative sequence analysis, computational simulation and system modeling, biological databases and data mining, and computational analyses of data from new molecular and high throughput experimental technologies; **http://www.soe.ucsc.edu/jobs/faculty/cbse/**

UCSC is an EEO/AA/IRCA Employer.
Women and minorities are encouraged to apply.

ASSISTANT, ASSOCIATE, AND FULL PROFESSORS
MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY
CENTER FOR GENETICS AND DEVELOPMENT
UNIVERSITY OF CALIFORNIA, DAVIS

The Center for Genetics and Development, University of California, Davis, invites applications for three tenure-track positions at the levels of Assistant, Associate, or Full Professor. The Center will be a physical and intellectual focal point for research in advanced molecular genetics and development across the five sections of the Division of Biological Sciences and in related campus units. The Center will be recruiting new faculty members at the Assistant, Associate, and Full Professor levels over the next several years. These appointments will be made jointly with an academic unit in the biological sciences as is appropriate to the background and interests of the candidates, and appointments will reside in an appropriate academic department to be determined in consultation with the successful candidate. A Ph.D. (or equivalent) is required. Candidates must have an outstanding record of achievement in research and will be expected to develop a strong research program in an area broadly related to genetics and development. We seek outstanding individuals in all areas of molecular, cellular, and developmental biology, and we seek to augment and complement existing strength in chromosome biology and signal transduction. The successful candidate will be expected to participate in the normal teaching responsibilities of the faculty. Applicants should submit (1) a curriculum vitae, (2) a statement of current and proposed research, and (3) arrange to have at least three letters of recommendation sent to: **Dr. Stephen Kowalczykowski, Director, Search Committee, Center for Genetics and Development, University of California, Davis, One Shields Avenue, Davis, CA 95616-8665.**

Closing date: Open until filled, but all application materials, including letters of recommendation, must be received by November 15, 2002 to be assured full consideration.

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

TENURE-TRACK FACULTY POSITIONS
Bioengineering
Rice University

The Department of Bioengineering at Rice University invites applications for tenure-track faculty positions. Applicants should have a strong multidisciplinary background in their respective fields and substantial experience in independent research and in obtaining competitive funding. We are particularly interested in Researchers with exceptionally strong research expertise and interest in working at both the macro level of tissues and micro/nanoscale level of cells, organelles, and molecules.

The successful applicant would establish research collaborations with institutions at the adjacent Texas Medical Center, groups at the Institute of Biosciences and Bioengineering at Rice University, and with the Keck Center for Computational Biology in Houston, Texas. Applicants would be expected to develop and teach courses in the areas of biomedical engineering at the undergraduate and graduate levels. Applicants should send curriculum vitae, which includes a list of publications, a statement describing their proposed research, and names of at least three references, to:

Rice University
Department of Bioengineering MS–142
Attention: Professor Larry V. McIntire, Chair
P.O. Box 1892
Houston, TX 77251-1892

For full consideration, applications should be received by December 31, 2002. *Rice University is an Equal Opportunity Employer.*

PLANT CELL BIOLOGIST

The Department of Botany at the University of Florida invites applications for a tenure-track **ASSISTANT** or **ASSOCIATE PROFESSOR** in the area of plant cell biology to begin in August of 2003. The successful applicant will be part of the University of Florida Genetics Institute. Preference will be given to applicants with postdoctoral experience and who use genetics or genomics approaches in an area such as (but not limited to) cell wall and/or cytoskeleton dynamics, signal transduction, and morphology/development. Applicants who complement existing strengths in plant physiology, developmental biology, signal transduction, and genetics are desired. A strong commitment to both undergraduate and graduate teaching and training is required. Teaching responsibilities include cell biology and a graduate course in their area of expertise. Applicants should send curriculum vitae; brief statements of research goals and teaching philosophy; and three letters of reference to: **Search Committee, Department of Botany, 220 Bartram Hall, University of Florida, Gainesville, FL 32611-8526** by December 9, 2002. **Website: http://web.botany.ufl.edu/**. *The University of Florida is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION
Department of Molecular Biology
Princeton University

The Department of Molecular Biology at Princeton University invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. We are seeking an outstanding young Investigator in any area of molecular biology but will give special consideration to applicants investigating questions in cell biology, biochemistry, cancer biology, and vertebrate development. The Department has extensive facilities that include high-level computing, confocal and electron microscopy, FACS, DNA array technology, mass spectrometry oligonucleotide/peptide synthesis, and a transgenic mouse facility. Ph.D.s or M.D.s with postdoctoral research experience should send curriculum vitae, short summary of research interests, and three letters of reference to: **Search Committee, c/o Trisha Barney, Department of Molecular Biology, Princeton University, Princeton, NJ 08544-1014**. For full consideration, applications should be received by December 15, 2002. For additional information about the Department, visit our **website: http://www.molbio.princeton.edu**.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

Applications are invited to fill **TENURE-TRACK POSITIONS** in analytical chemistry and/or biochemistry to begin as early as fall semester 2003. Funding for three positions has been authorized. One senior-level position in analytical chemistry will be considered. Candidates must demonstrate potential for establishing a vigorous and externally funded research program and demonstrate a commitment to excellence in graduate and undergraduate teaching. Applicants must have a Ph.D. degree and productive postdoctoral research experience. Further specifications: Analytical chemistry: Preferred research interests are in the areas of mass spectrometry, surface analysis, separations, or other analytical techniques complementing departmental research interests in materials and biological chemistry; however, outstanding applicants in other areas will be considered. Teaching responsibilities will be in the analytical and general chemistry areas. Biochemistry: Preference will be given to candidates who can contribute to University initiatives in biochemistry and proteomics. Research areas can range from biophysical chemistry to molecular biology. Expertise in the development of state-of-the-art biotechnological methods is desirable. Teaching interests will be in biochemistry and biotechnology.

Applicants shoul send (1) an up-to-date curriculum vitae, (2) a summary of research experience (indicating the applicant's most important contributions), (3) detailed plans for future research and grant proposals, (4) a short statement of teaching philosophy and interests, (5) copies of undergraduate and graduate transcripts of grades, and (6) arrange for three letters of recommendation to be sent to the Department Chair.

Application materials and letters of recommendation should be sent to: **Dr. Roger B. Gregory, Chair, Department of Chemistry, Kent State University, P.O. Box 5190, Kent, OH 44242-0001. E-mail: chem@kent.edu**. Review of applications will begin November 15, 2002, and will continue until the positions are filled. *Kent State University is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK FACULTY POSITIONS
Genetics and Developmental Biology

The Department of Genetics and Developmental Biology at the University of Connecticut School of Medicine is seeking highly qualified individuals with an outstanding background in developmental genetics. Areas of interest include but are not limited to genetic and epigenetic mechanisms of gene regulation, animal models of human disease, control of cell growth and differentiation, and studies of nuclear structure and function.

Applications are invited for two positions at the **ASSISTANT, ASSOCIATE,** or **FULL PROFESSOR** level. Faculty will enjoy superb resources including generous start-up funds and space in a new research building. There are state-of-the-art core facilities for mouse transgenics and ES cell manipulation, microarray production and analysis, nucleic acid sequencing, flow cytometry, confocal microscopy, and fluorescence imaging. Faculty will be expected to establish independent and innovative research programs that will attract extramural funding and to actively contribute to a rich scientific environment.

Candidates are invited to visit the departmental **website: http://genetics.uchc.edu** and should apply by submitting (preferably electronically) curriculum vitae, selected publications, and the names of three references to:

Marc Lalande, Ph.D.
Professor and Chair
Department of Genetics and Developmental Biology
The University of Connecticut Health Center School of Medicine
Farmington, CT 06030-3301
E-mail: lalande@neuron.uchc.edu

UCHC is an Equal Opportunity Employer; Minorities/Females/Veterans/Persons With Disabilities.

POSITIONS OPEN

MOLECULAR EVOLUTIONARY BIOLOGY OR PLANT SYSTEMATICS

The Ecology and Evolution group of the Department of Biological Science at Florida State University invites applications for a tenure-track position in molecular evolutionary biology to be filled at the **ASSISTANT PROFESSOR** level. We have a particular interest in a Plant Systematist or a Microbial Ecologist/Evolutionary Biologist but will consider any excellent candidate broadly defined as a Molecular Evolutionary Biologist. The successful candidate will be expected to establish an independent research program and to contribute to undergraduate and graduate teaching. For more information about the position, please go to **website: http://www.bio.fsu.edu/molevol.** Each applicant should submit curriculum vitae, description of research interests and goals, statement of teaching interests, and selected reprints. Each applicant should also provide names and contact information for three references and arrange to have letters of recommendation sent to the Search Committee. All application materials including letters must be received by 15 November 2002. Application materials should be mailed to: **Molecular Evolutionary Biology Search Committee, Department of Biological Science, Florida State University, Tallahassee, FL 32306-1100** or be submitted electronically to **e-mail: molevol@bio.fsu.edu**. Questions may be addressed to **e-mail: molevol@bio.fsu.edu**. *Florida State University is an Equal Opportunity/Affirmative Action Employer committed to diversity in hiring and a Public Records Agency.*

FACULTY POSITION
Department of Immunology
University of Washington School of Medicine

The University of Washington seeks highly qualified applicants for tenure-track appointments in the Department of Immunology. Applicants must hold Ph.D. or M.D. degree, have a record of published research in immunobiology, and have teaching experience at the undergraduate and graduate levels. Although the emphasis will be placed on recruiting **ASSISTANT PROFESSORS** to the Department, outstanding applicants at the **ASSOCIATE PROFESSOR** and **PROFESSOR** levels will be considered. The Department of Immunology offers excellent laboratory space, flow cytometry, confocal microscopy, transgenic animal facilities, and access to contemporary analytical tools to address complex systems at the genetic and protein level. Send curriculum vitae, a brief description of proposed research, and names and addresses of three references to:

Christopher B. Wilson, M.D.
Professor and Chair
Department of Immunology
Box 357650
University of Washington
Seattle, WA 98195-7650

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

The Department of Biology at the University of North Florida invites applications for an **ASSOCIATE PROFESSOR** beginning August 2003. Candidates must have a Ph.D. in biology, a commitment to undergraduate education, and an established research program in molecular physiology as evidenced by a strong record of publications and active external funding. The research program should be appropriate for undergraduate and Masters-level student participation. The successful candidate will play a key role in the development of a new Master's degree program in biology. Credit towards tenure is negotiable.

A letter of application; curriculum vitae; concise statements of teaching experience and research interests; undergraduate and graduate transcripts; and three letters of reference should be sent to: **Associate Professor Search Committee, Department of Biology, University of North Florida, 4567 St. Johns Bluff Road, South Jacksonville, FL 32224-2661** by postmark deadline December 6, 2002. For more information about UNF, visit **website: http://www.unf.edu**. *UNF is an Equal Opportunity/Equal Access/Affirmative Action Institution.*

FACULTY POSITION IN COMPUTATIONAL BIOLOGY and BIOINFORMATICS

Department Environmental and Occupational Health Graduate School Public Health University of Pittsburgh

The University of Pittsburgh is developing a new Program in Computational Biology and Bioinformatics that will both integrate the diverse scientific activities across six schools of Health Sciences and build additional expertise in computational solutions to biological problems. These efforts are being coordinated by Dr. Ivet Bahar, Director, Center for Computational Biology and Bioinformatics. A tenure-track position is available at the Assistant Professor level, in the area of computational toxicology and pharmacology, with Faculty appointment in the Department of Environmental and Occupational Health, Graduate School Public Health. Candidates should have an interdisciplinary background that integrates biological knowledge with theoretical and computational approaches. Postdoctoral experience in computational methodologies applied to biological, genomic, toxicological or pharmacological problems is essential. Areas of research include statistical analysis of DNA microarrays or gene chip probe array data; understanding structural and dynamic basis of immune response, cytotoxicity, genetic instability, inhibition/activation of intercellular communication, and metabolic activation of carcinogens; large database searches and manipulations; risk assessment from predictive toxicology models; application of SAR methods; modeling and simulation of molecular assemblies, receptor binding, docking, towards rational design of drugs and molecular targets. Successful candidates will develop their research programs while contributing to the collaborative efforts across the Schools of Health Sciences and Faculty of Arts and Science.

Applications will be received until position is filled. Applicants should provide a one-page statement of research, a curriculum vitae and names and contact information of three references to: **Dr. Ivet Bahar, Director, Center for Computational Biology and Bioinformatics, Department of Molecular Genetics and Biochemistry, Kaufman Building Suite 601, 3471 Fifth Avenue, Pittsburgh PA 15213; bahar@pitt.edu.**

The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer

Tenure Track Faculty Positions in Developmental Biology

Memorial Sloan-Kettering Cancer Center invites applications for tenure-track faculty positions at the Assistant Member level for the new Program in Developmental Biology. Successful candidates will carry out independent research programs addressing problems in any aspect of developmental biology. Topics of particular interest include morphogenesis, cell and tissue polarity, and organogenesis. Research could focus on either vertebrate or invertebrate development; expertise in genetics or imaging would be appreciated. The new faculty members will join a community of developmental biologists in several research programs at Memorial Sloan-Kettering Cancer Center, which offers an outstanding research environment and support infrastructure (www.ski.edu). New faculty will participate in the joint graduate program with Weill Cornell Medical College (www.med.cornell.edu/gradschool).

Interested parties should forward their curriculum vitae, a description of their past research accomplishments and proposed research program, selected reprints, and three letters of recommendation to: **Developmental Biology Search, Mr. Steven Cappiello, Box 193, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, New York 10021. Application submission may also be via e-mail to s-cappiello@ski.mskcc.org** as either Microsoft Word or pdf files. Recommendation letters should be forwarded by post. Inquires to either Mr. Cappiello or Dr. Kathryn Anderson, Developmental Biology Program, Memorial Sloan-Kettering Cancer Center. Applications need to be received by December 1, 2002. EOE/AA

Memorial Sloan-Kettering Cancer Center
The Best Cancer Care. Anywhere.
www.mskcc.org

RESEARCH ASSISTANT PROFESSOR

The Department of Interdisciplinary Oncology and the H. Lee Moffitt Cancer Center and Research Institute at the University of South Florida College of Medicine are seeking a Research Assistant Professor.

This position is non-tenure earning and requires a Ph.D. and a minimum of two years post-doctoral experience in molecular biology and cancer related research. Candidates will formulate independent research projects that will lead to peer reviewed funding in the area of molecular pharmacology and cancer research. Basic Science focuses primarily on analyzing cancer cells survival and growth.

Interested candidates should send a curriculum vitae to:
William Dalton, Ph.D., M.D., Center Director and CEO,
H. Lee Moffitt Cancer Center & Research Institute,
12902 Magnolia Drive, Tampa, FL 33612.
Please reference Position No. 11813. Salary is negotiable.
Position is open until filled.
Review of applications begins November 1, 2002.

WWW.MOFFITT.USF.EDU

H. LEE MOFFITT Cancer Center & Research Institute
The End Of Cancer Begins Here.
A National Cancer Institute Comprehensive Cancer Center
At the University of South Florida

USF University of South Florida College of Medicine

The University of South Florida is an Equal Opportunity/Equal Access/Affirmative Action institution. For disability accommodations contact Kathy Jordan at (813) 632-1451 a minimum of five working days in advance. According to Florida law, applications and meetings regarding them are open to the public.

UMASS

ASSISTANT PROFESSOR IMMUNOLOGIST

The University of Massachusetts is located in a college town in Western Masachusetts within 3 hours drive to New York and 2 hours drive to Boston. The region houses Amherst, Smith, Hampshire and Mount Holyoke Colleges and is recognized nationally as both a center of higher education and a scenic treasure offering extensive opportunities for summer and winter recreation.

The Department of Veterinary and Animal sciences at the University of Massachusetts, Amherst invites applications for a Tenure-Track faculty position at the AssistantProfessor level. Applicants are required to have a Ph.D., or Ph.D./DVM, or a Ph.D./MD, post-doctoral training and to have developed an independent creative research program in molecular immunology with a focus on T cell development and maturation.

The candidate will be expected to teach an undergraduate course in immunology and immunological techniques and a graduate course in his/her area of expertise.

Applicants should send a letter of intent, statement of research interests, current curriculum vita and the names and contact information of three references to: **Dr. Samuel J. Black, Department of Veterinary and Animal Sciences, 314 Paige Lab, University of Massachusetts, Amherst, MA 01003.**

Review of applications will begin November 1, 2002 and continue until the position is filled.

The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.

POSITIONS OPEN

FACULTY POSITION
Behavioral Neuroscience
University of Florida

The Department of Psychology at the University of Florida invites applications for a full-time tenure-track faculty position in behavioral neuroscience, rank open. Applicants who have expertise in behavioral testing of chemosensory function are especially encouraged to apply. The position is part of an exciting joint initiative between the Department of Psychology, the University of Florida Center for Smell and Taste, and the McKnight Brain Institute to develop a focus of excellence in sensory testing of animal models. Applicants will be expected to establish an independent program of extramurally funded research, supervise and mentor graduate students, and participate in graduate and undergraduate teaching. The successful applicant will join the active, diverse neuroscience community on campus. Application deadline is December 6, 2002. Please include a statement of research and teaching interests, curriculum vitae, up to five reprints, and three letters of recommendation. Send materials to: **Dr. Alan C. Spector, Behavioral Neuroscience Search Committee Chair, Department of Psychology, 114 Psychology Building, Gainesville, FL 32611-2250.** For more information, see **website: http://www.psych.ufl.edu/.** *The University of Florida is an Equal Opportunity Employer/Affirmative Action Employer.*

TERRESTRIAL ECOSYSTEM ECOLOGY

Washington State University School of Biological Sciences seeks to fill a tenure-track position at the **ASSISTANT PROFESSOR** rank in terrestrial ecosystem ecology for fall 2003. We seek candidates whose teaching and research is focused on understanding terrestrial ecosystem processes. Examples of relevant areas include but are not limited to global change (e.g., atmosphere-canopy exchange, climate change) or ecosystem function (e.g., water, nutrient, and carbon cycling). The successful candidate will be expected to develop a vigorous, externally funded research program and to train undergraduate and graduate students. Ph.D. is required and applicants with postdoctoral experience, current grant support, or teaching experience will be given preference. Submit curriculum vitae, selected reprints, a description of research interests, a separate description of teaching interests, and contact details including e-mail addresses for three letters of reference to: **R. Alan Black, Ecosystem Search Committee, School of Biological Sciences, Washington State University, Pullman, WA 99164.** Review of applications will begin on December 1, 2002, and continue until the position is filled. *WSU is an Equal Opportunity Educator and Employer. Members of protected groups are encouraged to apply.*

ASSISTANT/ASSOCIATE PROFESSOR. Conservation Biologist/Terrestrial Vertebrate Ecologist. Tenure-track, nine-month appointment to begin August 15, 2003; qualified to teach general ecology, conservation biology, introductory biology courses, and classes in wildlife management. In addition to a 12-hour/semester teaching assignment, research through active participation in undergraduate wildlife and biology M.S. programs is expected. Essential qualifications include the Ph.D. degree, evidence of excellent teaching and communication skills, and a strong commitment to develop and continue an active research program involving both undergraduate/graduate students. A complete application must include a letter of application, résumé, unofficial transcripts, statement of teaching philosophy and research interests, and three letters of recommendation. Send applications to: **Dr. Charles Elliott, Department of Biological Sciences, 521 Lancaster Avenue, Eastern Kentucky University, Richmond, KY 40475. E-mail: charles.elliott@eku.edu.** For additional information, see **website: http://www.biology.eku.edu.** Closing date for receipt of applications is December 6, 2002. *Eastern Kentucky University is an Equal Opportunity/Affirmative Action Employer. Members of minority groups and women are strongly encouraged to apply.*

POSITIONS OPEN

ASSISTANT PROFESSOR, ENVIRONMENTAL HEALTH SCIENTIST. The Department of Biological Sciences and the Environmental Sciences Program, Southern Illinois University, Edwardsville, invite applications for a tenure-track position in environmental health sciences at the Assistant Professor level. We seek applicants with a background in environmental health sciences and with proficiency in quantitative methods (e.g., statistical, empirical, simulation, and/or GIS modeling) and experience and commitment to research in environmental health. The successful candidate will develop a course in environmental health and teach other courses as requirements or electives in the Program (for example, occupational health and chemical safety management courses) and develop a strong research program in environmental health. Candidates should exhibit potential for independent and innovative research involving Master's and undergraduate students. Qualifications: a Ph.D. in biology or related field with specialization in the field of environmental health required at the time of hire. Postdoctoral teaching and research experience preferred. To apply, send a letter of application; a statement of your teaching philosophy; a statement of your research interests; your curriculum vitae; copies of representative publications; copies of official university transcripts; three letters of reference submitted by references directly to the Department; and names, telephone numbers, addresses, and e-mail addresses (if available) of three references to: **Chair, Environmental Health Search Committee, Box 1651A, Department of Biological Sciences, Southern Illinois University, Edwardsville, Edwardsville, IL 62026-1651.** Additional information about the Department and the Environmental Science Program can be seen at **websites: http://www.siue.edu/BIOLOGY** and **http://www.siue.edu/ENVS.** Review of complete applications will begin on January 8, 2003, and continue until position is filled. SIUE is a comprehensive regional university located on a 2,660-acre campus in a semi-rural setting only 25 minutes from downtown St. Louis, Missouri. The University is dedicated to excellence in undergraduate education. *SIUE is an Affirmative Action Employer.*

FACULTY POSITION
NEUROSCIENCE
Ohio University
College of Osteopathic Medicine

Two tenure-track, state-funded positions at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level are available in the Department of Biomedical Sciences of the Ohio University College of Osteopathic Medicine. The selected candidate will teach basic neuroscience to medical students in an integrated curriculum emphasizing student engagement and active learning. A Ph.D. or equivalent is required and postdoctoral experience is highly desirable. Applicants should also have an independent research program and strong potential for obtaining extramural funding as evidenced by high-quality publications. Ohio University and the College of Osteopathic Medicine have an active interdisciplinary research community. For more information on the Department and areas of research emphasis, visit our **website: http://www.oucom.ohiou.edu/dbms/index.htm.**

Ohio University, with a population of 20,000 students, is located in a picturesque college town in the rolling foothills of the Appalachian Mountains in rural southeastern Ohio where costs of living are moderate. The appointment begins July 1, 2003. The 11-month salary will be commensurate with experience and is accompanied by an excellent benefits package. Review of applications will begin December 1, 2002, but applications may be tendered until the position is filled. Submit a statement of career interests, curriculum vitae, representative reprints, and three letters of recommendation to: **Linda S. Ross, Ph.D., Search Committee Chair, Department of Biomedical Sciences, Ohio University, Athens, OH 45701. E-mail: ross@ohio.edu.** *Ohio University is an Affirmative Action/Equal Opportunity Employer with a dual-career network (website: http://www.ohio.edu/dual).*

POSITIONS OPEN

ASSOCIATE CHIEF OF STAFF FOR RESEARCH

The Indianapolis VA Medical Center, an affiliate of the Indiana University School of Medicine, is accepting applications for the position of full-time Associate Chief of Staff for Research. *Applicants must be U.S. citizens* and have an M.D., D.O., Ph.D., or equivalent degree. Physicians must hold a degree from an accredited school, a current and unrestricted license to practice medicine, and be Board certified by an American Specialty Board. Applicants should have demonstrated significant and distinguished accomplishments in both research and administration. Familiarity with compliance issues and experience in the VA system are both highly desirable. The successful candidate will have to meet VA requirements for appointment as Associate Chief of Staff for Research and Indiana University School of Medicine requirements for faculty appointment at the **ASSOCIATE PROFESSOR** or **PROFESSOR** level. In addition to overseeing the operation of the research program and directing the Research Administration office, the appointee will be expected to maintain an outstanding research program of his or her own to foster the growth of existing research programs; to facilitate the initiation of new programs; and to foster the careers of new Investigators. The Indianapolis VAMC and affiliate research programs have an annual research budget of approximately $10 million and are closely integrated with the Indiana University Research Program. Please send cover letter and curriculum vitae with three professional references to: **Mark Deeg, M.D. (111E), Medical Service, Indianapolis VA Medical Center, 1481 West 10th Street, Indianapolis, IN 46202.** Complete application packages must be received no later than November 15, 2002. *The Indianapolis VAMC is an Equal Employment Opportunity/Affirmative Action Employer.*

TENURE-TRACK ASSISTANT PROFESSOR
Ecology
University of Richmond

The Department of Biology at this highly selective, private, primarily undergraduate university invites applications for a tenure-track position in ecology at the Assistant Professor level to join a growing department in a remodeled and expanded facility. The successful candidate will be expected to maintain a research program that complements existing strengths in the Department, attracts extramural funding, and actively engages undergraduates. Teaching excellence that includes participation in the introductory biology core in the upper-level elective in area of specialization and participation in general education is expected. A Doctoral degree, postdoctoral experience, and a record of research productivity are required. Applicants should submit curriculum vitae, three recent publications, separate statements of (1) research interests and plans and (2) teaching experience and plans, and should have three letters of reference sent to: **Dr. Valerie M. Kish, Department of Biology, University of Richmond, Richmond, VA 23173.** Review of applications will begin December 1, 2002, and continue until the position is filled. Anticipated starting date of August 2003. For more information on the Department, resources, and teaching assignment, see **website: http://www.richmond.edu/academics/a&s/biology/index.html.** *The University of Richmond is committed to increasing the diversity of our faculty and strongly encourages applications from women and minorities.*

DEVELOPMENTAL/CELL BIOLOGIST. Texas Christian University seeks a tenure-track **ASSISTANT PROFESSOR** to begin fall 2003. Teaching responsibilities and annual participation in team-taught courses for biology majors/premedical students and offering two upper-level courses (developmental biology and preferably histology) in alternating years. Research area should be in cell/molecular/developmental biology. For more information about the position (including application procedures) and the Bilogy Department, see **website: http://www.bio.tcu.edu.** Review of applicants will begin November 15, 2002. *Affirmative Action/Equal Opportunity Employer.*

The Hong Kong University of Science and Technology
School of Science
Two Tenure-Track Assistant Professor Positions

The Atmospheric, Marine and Coastal Environment (AMCE) Program is a new interdisciplinary, interdepartmental postgraduate (MPhil and PhD) program under the School of Science, which focuses on research in atmospheric and marine environmental science (website: www.ust.hk/~webamce). Applications are invited for the following positions:

1) A joint faculty position in **Biology** with research interests in **Marine Ecology**. Appointee is expected to participate in teaching undergraduate courses such as Ecology and Marine Biology and a graduate course of his/her specialty; and
2) A faculty position in **Chemistry** in the area of **Analytical Chemistry** with research interests in **Marine Chemistry.** Appointee will teach a course in analytical chemistry and a course of his/her specialty. He/She will also be an affiliate member of the AMCE Program.

Applicants must have a PhD degree, postdoctoral experience and the ability to establish a strong independent research program. They should also excel in teaching. Starting salary will be commensurate with qualifications and experience. Fringe benefits including medical/dental benefits and annual leave will be provided. Assistance in housing will also be provided where applicable. Initial appointment will normally be on a three-year contract. A gratuity will be payable upon successful completion of contract. Re-appointment is subject to mutual agreement with possibility of tenure.

Applications should be sent with a curriculum vitae, a statement on research interests and teaching philosophy, and the names and complete addresses (including e-mail addresses) of three referees to: Recruitment Committee, AMCE Program, Hong Kong University of Science & Technology, Clear Water Bay, Hong Kong, before **30 November 2002**. The search will continue until suitable appointment is made. *(This is a re-advertisement for a previous advertisement placed on 5 October 2001 issue of Science.)*

BIOLOGY FACULTY

Slippery Rock University of PA invites applications for two tenure track assistant professor positions in the Department of Biology beginning August 2003.

Cell Biologist: Teaching responsibilities include a combination of introductory biology courses designed for the Liberal Studies Program, cell biology, and to contribute to existing courses. AA#02-57

Plant Ecophysiologist: Teaching responsibilities include a combination of introductory biology courses designed for the Liberal Studies Program, plant physiology, and to contribute to existing courses. AA#02-58

Other duties/expectations: commitment to excellence in teaching in a Liberal Arts setting; timely development of advanced course in field of expertise that complements the mission of the Department and College; establish productive research programs that may involve undergraduates (specific research areas are open); participate in University committees.

Requirements: Earned Ph.D. in a biological science and teaching experience; evidence of teaching effectiveness, professional competence and ability to work productively with students and colleagues; successful performance in an on-campus interview, including teaching and research presentations.

Send letter of interest, resume, statement of academic philosophy and research goals, teaching evaluations, graduate and undergraduate transcripts (official transcripts will be needed before hiring), and three letters from professional references to:

Dr. Carolyn Steglich
Cell Biologist Search Chair
Dept. of Biology
Slippery Rock University
Slippery Rock, PA 16057
Ph. 724-738-2475
Fax: 724-738-4782
Email: carolyn.steglich@sru.edu

Dr. Jack R. Layne, Jr.
Plant Ecophysiologist Search Chair
Dept. of Biology
Slippery Rock University
Slippery Rock, PA 16057
Ph. 724-738-2487
Fax: 724-738-4782
Email: jrl@sruvm.sru.edu

Review of applications will begin Dec. 1, 2002 and continue until positions are filled. Visit us on our web page at **www.sru.edu**. **TTY#724-738-4881.**

Slippery Rock University of PA is a member of the State System of Higher Education and is an Affirmative Action/Equal Opportunity Employer.

McGill University
Department of Psychology
Assistant or Junior Associate Professor Position in Quantitative Psychology

The Department of Psychology of McGill University invites applications for a tenure-track position at the Assistant or junior Associate Professor level in **Quantitative Psychology**. The position may be in any area of quantitative psychology, but candidates involved in the development of data analysis techniques appropriate to behavioural or neural science are particularly encouraged to apply. Applicants at the Assistant Professor level should present early evidence of the ability to establish a record of significant externally funded research productivity, and applicants at the Associate Professor level should have such a record. Applicants are expected to have a doctorate in psychology or a closely related field at the time of appointment. All applicants are expected to have an aptitude for undergraduate and graduate teaching. Review of applications will begin November 15, 2002, and continue until suitable candidates have been identified. Candidates should submit a curriculum vitae, a description of research interests and academic goals, a description of their teaching interests, experience and philosophy, and some selected reprints of publications. They should also arrange for three confidential letters of recommendation to be sent to:

Chair, Quantitative Psychology Search Committee
Department of Psychology
McGill University
1205 Dr. Penfield Avenue
Montreal, Quebec, Canada H3A 1B1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. McGill University is committed to equity in employment.

Southwestern University
Biology
Population, Community, or Ecosystem Ecologist

The Southwestern University Department of Biology invites applications from broadly trained Ecologists with a research emphasis in population, community, or ecosystem ecology to apply for a tenure-track appointment at the level of Assistant Professor to begin August 2003. A Ph.D. and a strong commitment to undergraduate teaching are required; teaching experience and post-doctoral research are desired.

Teaching responsibilities will include Biological Diversity and Interactions for first year biology majors, Environmental Science, an upper-level course in Ecology, and at least one upper-level course in biology such as Aquatic Ecology, Biogeochemistry, Conservation Biology, Global Change Biology, or Restoration Ecology. The successful candidate may elect to participate in Southwestern's interdisciplinary Environmental Studies Program. The successful candidate will be expected to develop a research program that actively involves undergraduates.

Southwestern University is a selective, undergraduate institution committed to a broad-based liberal arts and sciences education. Affiliated with the United Methodist Church, it has over 1,250 students and maintains an attractive 11:1 student/faculty ratio. Southwestern's endowment of more than $280 million ranks among the highest per student of undergraduate institutions in the country. The University is located in Georgetown, Texas, 28 miles north of the Austin metropolitan area. For more information, visit our web site at **www.southwestern.edu**.

Interested persons should send a letter of interest, curriculum vitae, statements of teaching and research philosophies, graduate and undergraduate transcripts, and three current letters of recommendation to: **Faculty Recruitment Office, Ecologist, Southwestern University, P.O. Box 770, Georgetown TX 78627-0770.** Review of applications will begin on November 8, 2002.

Southwestern University is an Equal Opportunity Employer and strongly encourages women and minorities to apply. EOE/M/F

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR. Microbial Ecologist. Tenure-track, nine-month appointment to begin August 15, 2003; qualified to teach general microbiology and, possibly, microbial physiology and genetics and clinical microbiology. Opportunity will also exist to develop a course related to microbial ecology. In addition to a 12-hour/semester teaching assignment, research through active participation in the undergraduate microbiology and biology M.S. programs is expected. Essential qualifications include a Ph.D. degree in microbiology, evidence of excellent teaching and communication skills, and a demonstrated commitment to develop an active research program in soil microbial ecology involving undergraduate/graduate students. A complete application must include a letter of application, résumé, unofficial transcripts, statement of teaching philosophy and research interests, and three letters of recommendation. Send applications to: **Dr. John Harley, Department of Biological Sciences, Eastern Kentucky University, 521 Lancaster Avenue, Richmond, KY 40475-3102. E-mail: john.harley@eku.edu.** For additional information, see our **website: http://www.biology.eku.edu.** Closing date for applications is December 6, 2002. *Eastern Kentucky University is an Equal Opportunity/Affirmative Action Employer. Members of minority groups and women are strongly encouraged to apply.*

DREXEL UNIVERSITY
Department of Materials Engineering

The Department of Materials Engineering is seeking applicants to fill two **TENURE-TRACK FACULTY POSITIONS**. These positions will be offered at a rank commensurate with qualifications of the applicant. We are particularly interested in the areas of (1) high-resolution microscopy with applications in nanoscale phenomena, (2) biomaterials and biosensors, and (3) atomistic modeling. Priority will be given to candidates who, in addition to their own research, will be able to strengthen research in areas of great current interest such as nanotechnology, biomaterials, mechanics and microstructures, and processing of novel materials.

Applications including curriculum vitae, a statement of teaching and research plans (each two pages maximum), copies of up to three relevant publications, and at least three recommendation letters should be sent to:

Faculty Search Committee Chair
Department of Materials Engineering
Drexel University, Philadelphia, PA 19104
Website: http://www.materials.drexel.edu

Review of applications will begin immediately and will continue until the positions are filled. *Drexel University is an Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK POSITIONS
ISRAEL'S VETERINARY SCHOOL

The Koret School of Veterinary Medicine, The Hebrew University, invites applications for tenure-track faculty positions in various fields including veterinary public health (epidemiology, food hygiene, zoonoses); veterinary pathology (diagnostic, experimental, and/or molecular pathology); biomedical research (microbiology, infectious diseases, virology, parasitology, genetics, pharmacology).

A Ph.D. and/or D.V.M. (or M.D.) including postdoctoral research training are required. Excellence in research and teaching will be the primary factors considered by the Search Committee. The successful applicant will be expected to establish an independent, extramurally funded research program at the Veterinary School's research facilities in the Faculty of Agricultural, Food, and Environmental Quality Sciences in Rehovot, Israel, and to participate in teaching veterinary students and undergraduate and graduate students.

Positions are available at once and will remain open until filled. Please send curriculum vitae; summary of research interests; and three letters of reference by December 1, 2002, to: **Professor Michael Gutnick, Director, Koret School of Veterinary Medicine, The Hebrew University of Jerusalem, P.O. Box 12, Rehovot 76100, Israel.**

POSITIONS OPEN

PLANT CELL AND MOLECULAR BIOLOGY
University of Vermont

The Department of Botany and Agricultural Biochemistry announces the availability of a tenure-track position at the **ASSISTANT PROFESSOR** level. The successful candidate will be expected to establish a vigorous, externally funded research program using genetics, cell biology, or biochemistry that focuses on topics central to plant biology. Preference will be given to candidates that complement existing research strengths within the Department. Teaching responsibilities will include courses at the undergraduate and graduate levels that support the needs of the Department and interests of the candidate. Candidates must have (1) a Ph.D. and (2) significant postdoctoral experience in plant molecular biology. Information about the Department can be found at our **website: http://www.uvm.edu/~plantbio**. Review of applictions will begin December 1, 2002, and continue until the position is filled. Send a letter of application including a statement of research and teaching interests, curriculum vitae, and three letters of reference to: **Dr. Mary Tierney, Search Chair, Department of Botany and Agricultural Biochemistry, Marsh Life Science Building, Univesity of Vermont, Burlington, VT 05405.** *Affirmative Action/Equal Opportunity Employer and Educator. Women and representatives of diverse racial, ethnic, and cultural groups are strongly encouraged to apply.*

BIOINFORMATICS
Vassar College

The Department of Biology at Vassar College invites applications for a tenure-track faculty position at the level of **ASSISTANT PROFESSOR**. We seek a Biologist whose research and teaching interests include bioinformatic approaches. Areas of expertise may include but are not limited to the following: evolution, functional or comparative genomics, microbiology, cellular and molecular biology, physiological systems, and protein biochemistry/proteomics. The successful candidate should expect to develop an upper-level course on bioinformatics as well as teach at the introductory and intermediate levels. Development of a research program with student participation is expected and start-up funding is provided. A Ph.D. in biological science is required and postdoctoral experience is preferred. This position is funded in part by a grant from the Howard Hughes Medical Institute. Consideration of applications will begin on 8 November 2002. Applicants should submit curriculum vitae, representative reprints, a statement of research interests and goals, a statement of teaching interests, and three letters of reference to: **Mark Schlessman, Chair, Department of Biology, Box 731, Vassar College, Poughkeepsie, NY 12604. E-mail: schlessman@vassar.edu; website: http://biology.vassar.edu/.** *Vassar College is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION
Chemical Biology
Cornell University

The Department of Chemistry and Chemical Biology is searching for a tenured or tenure-track faculty member to join a new and evolving initiative in chemical biology. Faculty rank will be commensurate with experience. The successful applicant will be expected to carry out an effective interdisciplinary research program and to teach at both the undergraduate and graduate levels. A Ph.D. degree in chemistry, chemical biology, or a related field is required; postdoctoral experience is preferred. Applicants should submit curriculum vitae, publication list, and separate summaries of research experience and research plans. These materials and three letters of recommendation should be sent to: **Chair, Faculty Search Committee, Department of Chemistry and Chemical Biology, Baker Laboratory, Cornell University, Ithaca, NY 14853-1301.** Applications will be received and reviewed until the position is filled. *Cornell University is an Affirmative Action/Equal Opportunity Employer and Educator.*

POSITIONS OPEN

FACULTY POSITIONS IN BIOLOGY
University of North Dakota

We seek highly qualified individuals for two tenure-track positions at the **ASSISTANT PROFESSOR** level. The Department offers graduate degrees through the Ph.D. and provides an environment conducive for building a competitive research program. The successful candidates will demonstrate the potential to establish a productive and extramurally funded research program utilizing modern approaches in basic research. A Ph.D. is required and postdoctoral experience is desirable. Supervision of graduate students is also expected. For additional information about our department and these positions, consult **website: http://www.und.edu/dept/biology/jobs.html**. The positions will start on 16 August 2003. Review of applications will begin November 15, 2002, and continue until the positions are filled.

Geneticist. Teaching duties include a core undergraduate course in genetics and either an advanced course in an area of interest or participation in team-taught introductory biology lecture. Send curriculum vitae, three representative reprints, lists of relevant coursework, statements of teaching and research interests, and have three letters of reference sent directly to: **Dr. Albert Fivizzani, Chair, Genetics Search Committee, Biology Department, University of North Dakota, Grand Forks, ND 58202-9019.**

Infectious diseases. The Department has a strong tradition in vertebrate ecology, evolution, and conservation biology. We seek an individual with demonstrated expertise in the study of infectious diseases in wild vertebrate populations with special interest in the epidemiology or ecology of vertebrate diseases in natural and human-modified ecosystems. Teaching duties include an undergraduate course in the biology of infectious diseases and participation in a team-taught introductory biology lecture. Send curriculum vitae, statements of teaching and research interests, three representative reprints, and have three letters of reference sent to: **Dr. Robert Newman, Chair, Infectious Disease Search Committee, Department of Biology, University of North Dakota, Grand Forks, ND 58202-9019.** *UND is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT AND ASSOCIATE PROFESSORSHIPS IN IMMUNOLOGY
Institute for Cell Engineering
The Johns Hopkins University
School of Medicine

The mission of the Institute for Cell Engineering at Johns Hopkins is to foster basic scientific research in the broad areas of cellular differentiation and development with the expectation that such work will lead to therapeutic advances.

The Immunology Unit of the Institute for Cell Engineering invites applications for tenure-track faculty positions at the rank of Assistant or Associate Professor. We seek outstanding applicants who will establish vigorous and innovative research programs in an interactive and highly collegial environment. Candidates with interests in areas of fundamental importance to immunology including immune development, regulation, and therapy will be considered.

Applicants should submit curriculum vitae, a description of past accomplishments and future objectives, and should arrange to have three letters of reference sent directly to the Search Committee. Please send all materials to:

Immunobiology Search Committee
Institute for Cell Engineering
c/o Dr. Stephen Desiderio
Department of Molecular Biology and Genetics
The Johns Hopkins University
School of Medicine
725 North Wolfe Street
Baltimore, MD 21205

The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

Fisheries Biologist

Paul Smith's College seeks a faculty member for the new Fish and Wildlife Program, to teach and develop a research/public outreach program addressing fisheries management issues. Preference to candidates with PhD and undergraduate teaching and research experience; master's and significant related experience required. Further information about the position and Paul Smith's College is available on our website: **www.paulsmiths.edu**.

To apply, submit letter, C.V., and contact information for three references by **November 15, 2002** to:

Human Resources
PO Box 265
Paul Smith's College
Paul Smiths, NY 12970

fax 518-327-6161
or
email hr@paulsmiths.edu

EOE/AA/M/F/D/V.

Tenure - Track Faculty Position

DEPARTMENT OF PSYCHIATRY, UNIVERSITY OF MICHIGAN MEDICAL SCHOOL is recruiting a clinical child psychologist or child neuropsychologist for a tenure-track faculty position (rank open). The strength of the candidate is of greater importance than the specific research area. However, research in the area of mood or anxiety disorders is especially welcome. Applicants should have a substantial research record with external funding. The successful candidate will play a major role in developing research in the Division of Child and Adolescent Psychiatry, and in the clinical training of psychiatry residents and psychology postdoctoral fellows. Because of the clinical training responsibilities of the position, applicants should be licensed or licensable in Michigan, and capable of conducting, supervising, and teaching clinical child assessment in a psychiatric setting.

The search is being done in conjunction with the University of Michigan Life Sciences Initiative, a major investment designed to promote growth in cognitive neuroscience, complex genetics, and other life sciences. The Department of Psychiatry and affiliated institutes at the University of Michigan provide state-of-art research facilities and have strong research traditions in childhood psychopathology and its treatment. The University of Michigan offers attractive, comprehensive benefits, a salary commensurate with rank and experience, and start-up funds.

Qualified candidates should send a letter of interest and curriculum vitae to: **Gregory L. Hanna, M.D., Search Committee Chair, Division of Child and Adolescent Psychiatry, Department of Psychiatry, University of Michigan Health System, 1500 E. Medical Center Drive, Ann Arbor, MI 48109-0390.** Questions about the position may be directed to Dr. Hanna at 734-764-0234 or via email at ghanna@umich.edu. The University of Michigan is a Non-Discriminatory, Affirmative Action Employer.

The Salk Institute offers a highly interactive environment, with research groups working in genetics, molecular, cell, developmental and structural biology, infectious disease, neuroscience and plant biology.

The Salk Institute is seeking candidates for **Assistant Professor** positions to undertake independent research in the area of eukaryotic cell structure and function as part of a newly funded initiative in the Molecular and Cell Biology Laboratory (MCBL) and the Institute's Cancer Center. Current research in MCBL includes mechanisms of growth control, signal transduction, DNA replication, cell cycle regulation, receptor interactions, life span determination, chromosome structure and function, and nuclear organization. Cell structure and function will be interpreted broadly to encompass a variety of organisms, experimental systems and techniques, including microscopy and imaging.

The Salk Institute offers a competitive salary and excellent benefits. Applicants must be legally employable in the United States. Applications will be reviewed beginning **November 18, 2002**. Qualified candidates are invited to submit a curriculum vitae, description of present and future scientific endeavors, and three letters of recommendation to be sent to: **Dr. Tony Hunter, MCBL Search Committee Chair, The Salk Institute, 10010 North Torrey Pines Road, La Jolla, CA 92037 or Email: ayoung@salk.edu.**

THE SALK INSTITUTE

www.salk.edu

RAMAPO COLLEGE OF NEW JERSEY

Ramapo College of New Jersey is a four-year undergraduate college located in the beautiful foothills of the Ramapo Valley approximately 25 miles northwest of New York City. Established in 1969 as a state-supported, coeducational college of liberal arts, sciences and professional studies, this institution offers an array of undergraduate, graduate, and post baccalaureate programs focused on the four "pillars" of the Ramapo College mission - international, intercultural, interdisciplinary, and experiential education. The College is committed to global education. It is a Fulbright Center and houses the New Jersey Governor's School for International Studies.

ASSISTANT PROFESSOR OF ENVIRONMENTAL SCIENCE/GEOLOGY

(TENURE TRACK - FALL 2003)

JOB DESCRIPTION: Geologist/Earth Scientist to teach introductory geology (100 level to non-majors), Fundamentals of Earth Science with Lab (100 level, for environmental science majors), and advanced environmental Geology/Earth Science courses (300 level).

REQUIREMENTS: Ph.D. required or A.B.D. with imminent completion considered. Applicants must demonstrate teaching excellence, an ability to incorporate new technologies into their teaching, and a commitment to interdisciplinary teaching.

Faculty members are expected to maintain active participation in research and/or scholarship, college governance, and academic advisement.

All applications must be completed online on the college's website: http://www.ramapo.edu/hrjobs. Attach all pertinent documents. Review of applications will begin immediately, and continue until the position is filled.

Since its beginning, Ramapo College has had an intercultural/international mission. Please tell us how your background, interest and experience can contribute to this mission, as well as to the specific position for which you are applying. Position offers excellent state benefits. To request accommodations, call (201) 684-7734.

RAMAPO COLLEGE OF NEW JERSEY

Attention: Dept 25
505 Ramapo Valley Road
Mahwah, NJ 07430

"New Jersey's Public Liberal Arts College"

Ramapo College is a member of the Council of Public Liberal Arts Colleges (COPLAC), a national alliance of leading liberal arts colleges in the public sector. EEO/AFFIRMATIVE ACTION.

POSITIONS OPEN

The McGill University Prostate Cancer Research Program is seeking a full-time Molecular Biologist at the level of **ASSISTANT** or **ASSOCIATE PROFESSOR** to become part of a growing translational research team (currently composed of two Molecular and Cell Biologists, three Clinician-Scientists, and a Molecular Pathologist) focused on prostate cancer biology. The individual must have a Ph.D.; a strong background in cancer research, preferably in the investigation of prostate cancer; and is expected to establish an independently funded research program. The appointment will be primarily in the Department of Surgery/Division of Urology and will be associated with the Department of Oncology. Salary will be commensurate with the candidate's experience and rank. Please send curriculum vitae to:

Armen Aprikian, M.D.
McGill Prostate Cancer Centre
Division of Urology
McGill University Health Centre
1650 Cedar Avenue, L8-309
Montreal, Quebec H3G-1A4 Canada
Telephone: 514-934-8295
FAX: 514-934-8297
E-mail: armen.aprikian@muhc.mcgill.ca

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

EUKARYOTIC GENETICIST AND BIOLOGIST/BIOLOGY EDUCATOR

San Francisco State University invites applications for two tenure-track positions. Eukaryotic Geneticist: **ASSISTANT PROFESSOR**. Research interests in cell or molecular biology. Teaching responsibilities to include genetics. Biology Educator: **ASSISTANT** or **ASSOCIATE PROFESSOR**. Research record in biology and record of publication or experience in developing innovative curricula that promote student success in biology. Teaching responsibilities to include a core course serving prospective K–8 teachers. All applicants: Ph.D. required; postdoctoral experience preferred. Expected to maintain an extramurally funded research program engaging Master's-level and undergraduate students in their work. Send curriculum vitae, statements of research and teaching interests, reprints and syllabi (Bio-Ed), and three letters of reference to: **Geneticist** or **Biology Educator Search Committee, Department of Biology, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94132-1722**. Review of applications will begin December 2, 2002. For more information about the positions, visit **website: http://www.sfsu.edu/~biology**. *San Francisco State University is an Equal Opportunity/Affirmative Employer. Minorities, women, and persons with disabilities are especially encouraged to apply.*

STRUCTURAL BIOLOGIST NMR

The Department of Biochemistry and Biophysics at the University of Rochester School of Medicine and Dentistry invites applications for a tenure-track position in structural biology, particularly in protein and/or nucleic acid NMR spectroscopy. Recruitment is being targeted at the **ASSISTANT PROFESSOR** level but higher-rank appointment is possible based on qualifications. The University of Rochester School of Medicine is undergoing a major expansion in its research enterprise. Structural Biologists will find a stimulating and collaborative research environment. Please submit curriculum vitae, relevant reprints, statements of research accomplishments and research plans, and arrange to have three letters of reference sent to: **Structural Biology Search Committee, Department of Biochemistry and Biophysics, Box 712, University of Rochester Medical Center, 601 Elmwood Avenue, Rochester, NY 14642**. Review of applications will begin December 1, 2002. *The University of Rochester is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION IN BIOPHYSICS
Department of Physiology and Biophysics
University of Washington

The Department of Physiology and Biophysics at the University of Washington announces a search for a tenure-track faculty member in biophysics. Individuals with a Ph.D. or M.D. and a strong record of research accomplishments are invited to apply. Appointment at the **ASSISTANT PROFESSOR** level is preferred but higher ranks will also be considered if appropriate. We seek candidates whose research utilizes molecular or cellular biophysical approaches to study physiological problems in such areas as mechanotransduction, molecular motors, motility, and cytoskeletal signaling. The new faculty member will be expected to establish vigorous research programs and participate in teaching of graduate and professional students. For information about the Department, see our **website: http://depts.washington.edu/pbiopage**.

Submit curriculum vitae and a description of research accomplishments and plans and have three letters of reference sent to: **PBio Search Committee, Department of Physiology and Biophysics, Box 357290, University of Washington, Seattle, WA 98195-7290**. Electronic submission of applications to **e-mail: pbsearch@u.washington.edu** is strongly encouraged.

The University of Washington is building a culturally diverse faculty and strongly encourages applications from women and minority candidates. The University of Washington is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR BIOCHEMISTRY
Southwest Texas State University

The Department of Chemistry and Biochemistry invites applications for a full-time, tenure-track faculty position to complement our new undergraduate and graduate programs in biochemistry. A Ph.D. in an appropriate field is required and postdoctoral experience is preferred. Expectations include quality teaching at both the undergraduate and graduate level with the development of a successful research program benefiting undergraduate and graduate students. The position is open to all areas of biochemical research, and applicants are encouraged to investigate the many resources available in our department including the *Xiphophorus* genetic stock center. Additional information is available at our **website: http://www.swt.edu/chemistry**. To apply, submit curriculum vitae, a copy of transcripts, an outline of research plans, a statement of teaching philosophy, and the names of three references to: **Dr. Linette M. Watkins, Department of Chemistry and Biochemistry, Southwest Texas State University, San Marcos, TX 78666**. Review of applications will begin on November 1, 2002. *Southwest Texas State University is an Equal Opportunity Employer.*

DIRECTOR
John Sloan Dickey Center for International Understanding
Dartmouth College

The College seeks a distinguished scholar from any relevant discipline with strong entrepreneurial skills and wide recognition for engagement in the international arena for the position of Director. The Center enhances the research and teaching of Dartmouth faculty members whose international interests span the sciences, humanities, social sciences, and the professional schools. The Director will hold an appointment in the Center and an academic department or interdisciplinary program in the College of Arts and Sciences or one of the professional schools.

Please send a letter of intent, curriculum vitae, and a list of references to: **Chair, Dickey Search Committee, Office of the Provost, 6004 Parkhurst Hall, Dartmouth College, Hanover, NH 03755-3529**. Review of applications will begin on December 1, 2002. *Dartmouth College is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

POSITIONS OPEN

FACULTY POSITIONS
Biology
Lynchburg College

Two tenure-track **ASSISTANT/ASSOCIATE PROFESSOR** positions beginning August 2003 at Lynchburg College in Virginia, a private, coeducational, residential college. Rank and salary are commensurate with experience. **MICROBIOLOGIST/IMMUNOLOGIST** position: Teaching includes microbiology, immunology, and other courses in biomedical science. **BOTANIST** position: Teaching includes plant biology and ecology. Good knowledge of Eastern United States flora is expected and some training in plant cellular/molecular processes is desirable. The college also has established a 470-acre nature/environmental study center only 25 miles from campus that is diverse in flora, geology, and topography. For both positions, teaching also includes sharing of the freshman-level introductory biology sequence and advanced courses in area of expertise. Applicants must have a Ph.D. in biology or a related discipline, teaching experience, and a primary interest in teaching undergraduates at a liberal arts and sciences institution. Postdoctoral experience is a plus. Establishment of a research program that involves undergraduates is expected. Review of applications will begin immediately and continue until the position is filled. Please visit **website: http://www.lynchburg.edu/sciencepositions** for application instructions and additional information. Please submit applications to:

J. Clancy Leahy, Ph.D.
Dean, School of Sciences
Lynchburg College
1501 Lakeside Drive
Lynchburg, VA 24501

Lynchburg College is an Equal Opportunity Employer.

ASSISTANT PROFESSOR, PHYSIOLOGIST, Department of Biological Sciences, Murray State University. Full-time, tenure-track position to begin August 2003. Qualifications: Ph.D. required with preference given to candidates with expertise in physiology at the cellular or molecular level. Requires postdoctoral experience and evidence of productive research. Must have a strong commitment to teaching at undergraduate levels including students in ongoing research. Will be expected to develop a program capable of attracting external funding. This position is the result of a recent Howard Hughes Medical Institute Award to enhance biomedical research and education and accordingly carries a generous start-up package. Responsibilities: teaching courses in anatomy and/or physiology and the candidate's area of expertise. Ability to teach immunology is desirable. The Department of Biological Sciences has 16 faculty with graduate program concentrations in molecular and cellular biology, physiology, ecology, and organismal biology and will be relocating to a new science complex presently under construction. Application deadline: December 15, 2002. To apply: Submit a letter of interest, curriculm vitae, statement of teaching interests and philosophy, description of research, relevant reprints, three letters of recommendation, and copies of transcripts to: **Dr. Timothy Johnston, Search Committee Chair, Department of Biological Sciences, 334 Blackburn Science Building, Murray State University, Murray, KY 42071**. *Women and minorities are encouraged to apply. Murray State University is an Equal Education and Employment Opportunity Employer; Minorities/Females/Disabled. Affirmative Action Employer.*

RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW. An established laboratory is seeking a dynamic and self-motivated Molecular Biologist to study pancreatic beta cell function and proliferation in diabetic animals. Ph.D. and/or M.D. degree required. Competitive salary and benefits offered. Interested candidates should submit an updated curriculum vitae and bibliography plus a statement of long-term research interests to: **Dr. Savio Woo, Mount Sinai School of Medicine, Box 1496, One Gustave Levy Place, New York, NY 10029. E-mail: savio.woo@mssm.edu; FAX: 212-803-6740**.

The Department of Neuroscience, The Ohio State University College of Medicine and Public Health

Three tenure-track faculty positions are available at the Assistant, Associate or Full Professor level. The department is expanding in concert with several programs within the Medical Center, including new efforts in bioimaging and the neurobiology of disease. We are especially interested in research that will complement our programs in development, regeneration, repair, and neurodegeneration through the application of imaging technologies, cellular or systems electrophysiology, and molecular biology, but all areas of neuroscience with relevance to neurological disorders will be considered.

This is an exciting era of increasing growth at the Ohio State University Medical Center, with an ambitious plan for the addition of new research facilities and faculty. Neuroscience is a new department with a current faculty of 16 full-time members; there are many other neuroscientists affiliated with the Neuroscience Graduate Studies Program, a University-wide degree-granting program.

Mail or e-mail applications and inquiries to **Michael Beattie, Ph.D., Brumbaugh Professor and Chair, Department of Neuroscience, OSU Medical Center, 4068 Graves Hall, 333 W. 10th Ave, Columbus, OH 43210. 614-292-6639, or beattie.2@osu.edu**. For further information, see **http://medicine.osu.edu/neuroscience/**

Assistant/Associate/Full Professor Position

Department Environmental and Occupational Health Graduate School Public Health University of Pittsburgh

The Department of Environmental and Occupational Health, Graduate School Public Health invites applications for a tenure/tenure track faculty position (assistant/associate/full professor). Qualified M.D. or Ph.D. candidates from any subdiscipline of Life Sciences including toxicology, pharmacology, biochemistry, molecular biology, physiology, immunology or neurobiology with research programs focusing on molecular biology of signal transduction, mechanisms of gene regulation and molecular models of environmental science (lower eukaryotes, invertebrates, transgenic mice, human genomics) and with a track record of research funding are especially encouraged to apply. Opportunities exist for collaborative interactions within Graduate School of Public Health and School of Medicine including programs with extensive recent growth such as pulmonary and cardiovascular biology, stem cell and developmental biology, neuroscience and cancer biology. Further collaborations and support are available from outstanding resources in genomics, structural and computational biology and toxicology, imaging, gene therapy and drug discovery programs. Applicants who will complement existing strengths in pulmonary biology, free radical biochemistry, computational toxicology, molecular biodosimetry and carcinogenesis are encouraged to apply.

The successful candidate will be expected to develop outstanding independent research programs and participate in graduate teaching and advising. Very attractive start-up packages and competitive salaries have been committed. Successful applicant's rank will be determined by their qualifications.

Applications will be received until February 1, 2003. Interested applicants should provide a one-page statement of proposed research, a curriculum vitae and names and contact information of three references to:

Amy Butch
Department Environmental and Occupational Health
Graduate School Public Health
University of Pittsburgh
3347 Forbes Avenue Ste 203
Pittsburgh, PA 15260

Recruitment@ceoh.pitt.edu

The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer.

Six Tenure-Earning Positions in Cell/Development/ Conservation Biology

The Department of Biology at the University of Central Florida seeks highly qualified applicants for six tenure-earning positions at either the Assistant or Associate Professor level. Applicants at the Assistant Professor level should have a Ph.D., postdoctoral experience, and outstanding potential to attract external research funding. Applicants at the Associate Professor level should additionally have a strong record of publications and extramural funding. Successful applicants will be expected to contribute to teaching in the undergraduate core curriculum and teach at the graduate level in their specialty to MS and Ph.D. students. Biology graduate faculty currently participate in the Ph.D. in Biomolecular Sciences program and are anticipating the Ph.D. in Conservation Biology program that is expected to begin in January 2004.

Three positions in Cell Biology, Developmental Biology, or Developmental Genetics for individuals studying plant or animal model systems in any contemporary area of Cell and Developmental Biology. **One Population Biologist or Conservation Geneticist** conducting research on experimental ecology, plant-animal interactions, population genetics/modeling, or population viability analysis. **One Wetlands/Estuarine Ecologist** studying ecology, coastal fisheries biology, nutrient cycling, wetlands restoration, or ecosystem dynamics. **One Plant Conservation Biologist** conducting research as a field-orientated, terrestrial botanist, working on conservation issues, including invasive species, plant-insect interactions, plant taxonomy, plant ecophysiology, or restoration of upland communities. Applicants with academic interest in the UCF arboretum are encouraged to apply.

All applicants should submit their CV, a three page description of research plans and a statement of teaching philosophy, along with names and addresses of three references. The cover letter should indicate the position and level for which the applicant is applying. Applicant review will begin November 15, 2002 with an anticipated start date of August 2003. Address applications to either: **Dr. Laurie von Kalm, Chair, Cell and Development Biology Search Committee, or Dr. Reed Noss, Chair, Conservation Biology Search Committee, Department of Biology, University of Central Florida, Orlando, FL 32816-2368** (email: **lvonkalm@mail.ucf.edu** or **rnoss@mail.ucf.edu**).

The University of Central Florida is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. As an agency of the State of Florida, all application materials and selection procedures are available for public review.

FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry at Purdue University invites applications at the level of PROFESSOR in the area of plant biochemical genetics. We seek an individual using a combination of genetics and advanced technologies such as gene expression arrays and mass spectrometry to investigate fundamental questions in the model organism *Arabidopsis*. The candidate should have a Ph.D. and an outstanding record of research and scholarly achievements in the area of plant biochemistry. Applicants should send a curriculum vitae, a brief statement of research plans and the names of three references to:

Plant Biochemistry Search
Purdue University
Department of Biochemistry
175 S. University Street
West Lafayette, IN 47907-2063

Applications will be reviewed beginning **October 25, 2002** and will continue until the position is filled.

Purdue University is an Affirmative Action/ Equal Opportunity Employer fully committed to achieving a diverse workforce.

POSITIONS OPEN

TENURE-TRACK BIOCHEMIST
Department of Chemistry
Marshall University

The Department of Chemistry at Marshall University is seeking a candidate for a tenure-track **ASSISTANT PROFESSOR** appointment in biochemistry. This appointment will begin in August 2003. Qualified applicants will have a Ph.D. in biochemistry or a closely related field. Preference will be given to individuals with postdoctoral research experience and expertise in protein science and/or molecular recognition. He/she will be expected to teach at the undergraduate and graduate levels and develop an active, externally fundable research program. Chemists at Marshall enjoy fruitful collaborations with members of other departments in the University including interdisciplinary programs in biomedical sciences, forensic science, and biology. The successful candidate will be expected to participate actively in these interdisciplinary efforts. All candidates must send current curriculum vitae, statements of research plans and teaching philosophy, and three letters of reference to: **Chair, Biochemistry Search Committee, Department of Chemistry, One John Marshall Drive, Marshall University, Huntington, WV 25755. Website: http://www.marshall.edu/chemistry/biochemsearch**. The review of applicants will begin in November 2002 and continue until the position is filled. *Marshall University is an Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.*

Biology Department offering B.S., M.S., and M.A. degrees seeks candidates for two **TENURE-TRACK POSITIONS** beginning in fall 2003. Primary responsibility is teaching but the successful candidates are also expected to develop an active research program involving graduate and undergraduate students. Teaching responsibilities for the first position include introductory biodiversity and some suitable combination of ecology with laboratory, evolution, basic molecular biology techniques, general biology, and upper-level course(s) in the candidate's specialty. Teaching responsibilities for the second position include genetics and some suitable combination of basic molecular biology techniques; general biology; and course(s) in the candidate's area of specialty (e.g., environmental, developmental, cell, population, or evolutionary biology). The normal teaching load for faculty with a productive research program is nine credit hours per semester. Submit a letter of application; curriculum vitae; statement of teaching philosophy; research interests; and three letters of recommendation by December 15, 2002, to: **Valerie Flechtner, Department of Biology, John Carroll University, University Heights, OH 44118. Website: http://www.jcu.edu.** Located 10 miles from downtown, John Carroll University, the Jesuit University in Cleveland, celebrates the opening of the $66 million Dolan Science Center in 2003. *An Equal Opportunity/Affirmative Action Employer; women and minorities encouraged to apply.*

RESEARCH SCIENTIST
Litholink Corporation
Chicago, Illinois

Litholink is a rapidly growing biotechnology firm focused on disorders of mineral metabolism. We are seeking a candidate with a Ph.D. in basic science with experience in protein and molecular biology methods to coordinate and conduct research investigating bone disease in kidney stone-forming patients. Current research is NIH funded. Anticipate candidate will take leadership role in future grant applications. Experience in mineral metabolism (vitamin D, calcium, bone) is preferred but not essential. Salary is commensurate with experience. To apply, send résumés to: **Litholink Corporation, 2250 West Campbell Park Drive, Chicago, IL 60612. FAX: 312-2433297; e-mail: jasplin@litholink.com**. *Equal Opportunity Employer.*

POSITIONS OPEN

TERRESTRIAL ECOLOGIST/NATURAL RESORUCE BIOLOGIST
University of Hawaii at Manoa

The Department of Botany, College of Natural Sciences, invites applicants for a nine-month, tenure-track **ASSISTANT** or **ASSOCIATE PROFESSORSHIP**. We are seeking an individual who will contribute to the Hui Konohiki (**website: http://www.konohiki.edu**) and the Botany Department's teaching, research, and service missions by focusing on Hawaiian and/or Pacific Island ecosystems. Research and teaching interests may lie in any of the diverse fields of ecology, botany, or resource biology. The successful candidate is expected to develop an active, externally funded research program and to teach at both the undergraduate and graduate levels. This person will be an educational and research link between Hui Konohiki and the Lyon Arboretum. The successful candidate will work significantly with other Hui Konohiki faculty to combine elements of contemporary scientific methods, traditional Hawaiian science, and Hawaiian culture and philosophy in order to create courses in culturally based resource management. The successful candidate is expected to develop some competence in Hawaiian language. Minimum qualifications: Assistant Professor: Ph.D. from an accredited institution in botany or related life science, demonstrated scholarly achievement, teaching ability, and research rigor. Associate Professor: same as Assistant Professor plus at least four years at the Assistant Professor level or equivalent experience. Desirable qualifications: experience working in multicultural environments, familiarity with Hawaiian language or some other Polynesian language, experience in natural resource management, previous research or teaching experience in the Pacific Islands, knowledge of Hawaiian cultural practices regarding land and ocean resources. To apply: Applicants should provide curriculum vitae and a cover letter that addresses how they meet the qualifications for the position and how their philosophy of education will fit into the goals of the Hui Konohiki. Applicants should also provide contact information for three or more professional references and have them send supporting letters directly to the Hui Konohiki Program. To receive full consideration, applications must be received by November 15, 2002. However, review of applications will continue until the position is filled. Send materials to: **Hui Konohiki Program, c/o Botany Department, University of Hawaii at Manoa, 3190 Maile Way, Honolulu, HI 96822-2279**. *The University of Hawaii at Manoa is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.*

SYSTEMS NEUROSCIENTIST

The Department of Biological Sciences at Bowling Green State University invites applications for a senior neuroscience position beginning August 2003. **FULL PROFESSOR** preferred; senior **ASSOCIATE PROFESSOR** considered based on research credentials. Applicants are expected to have a research interest in the neural mechanisms of behavior with an appreciation for multiple levels of biological organization. Further information about the Department; the J.P. Scott Center for Neuroscience, Mind, and Behavior; and position can be found at **website: http://caspar.bgsu.edu/~neuro/BGSUneuro.html**. Applicants must send curriculum vitae; statement of research plans and teaching interests; four representative reprints; and four reference letters by December 1, 2002, to: **Paul A. Moore, Systems Neuroscientist Search Chair, Department of Biological Sciences, Bowling Green State University, Bowling Green, OH 43403-0212**. *Bowling Green State University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

VISITING FACULTY AND POSTDOCTORAL FELLOWSHIPS (2002–2003)
University of Colorado at Boulder

The Cooperative Institute for Research in Environmental Sciences (CIRES) under the sponsorship of the National Oceanic and Atmospheric Administration is offering up to six one-year Visiting Fellowships at the University of Colorado in Boulder. This is open to Scientists with research interests in the areas of the new CIRES Research Themes developed to better explain and illustrate both the broad range of CIRES' science as well as the interdisciplinary nature and connectedness of our research. For complete text, see **website: http://cires.colorado.edu/themes**. Application packets should include (1) curriculum vitae, (2) publications list, and (3) a brief (two- to four-page) description of the proposed research. For Scientists/faculty on sabbatical, please include salary support requirements. Applicants should request that letters of recommendation from three persons familiar with their qualifications be sent to the address below. Postdoctoral-level applicants must also submit undergraduate and graduate transcripts. Mail all application materials (including letters of recommendation) to:

Human Resources
CIRES Visiting Fellows Program
216 UCB
University of Colorado
Boulder, CO 80309-0216 U.S.A.

The deadline for receipt of application materials is December 15, 2002. *The University of Colorado is an Equal Opportunity/nondiscriminatory Institution.*

SENIOR RESEARCH FACULTY APPOINTMENT

The Division of Geological and Planetary Sciences at the California Institute of Technology invites applications for a senior Research Faculty position in space geodetic techniques with emphasis on GPS geodesy. Full-time (12 months) salary support is available for the position for up to five years beginning as early as January 1, 2003. The successful candidate will be expected to conduct innovative geodetic research in collaboration with research teams focused on key plate boundary deformation zones around the globe. Duties will include participating in the design of geodetic networks; working with students, Postdoctoral Fellows, and faculty members in the production of geodetic solutions; and developing new methods for the analysis and interpretation of geodetic data. This appointment is contingent upon completion of all requirements for the Ph.D. in the field of geodesy or a related field. Curriculum vitae including a list of publications, a brief statement of research accomplishments and objectives, and the names and contact information of three references should be sent to: **Edward M. Stolper, Chairman, Division of Geological and Planetary Sciences, Mail Code 170-25, California Institute of Technology, Pasadena, CA 91125.**

The salary range is $47,500 to $111,000 per year commensurate with experience. The Institute will begin to review applications on November 1, 2002.

California Institute of Technology is an Equal Opportunity/Affirmaive Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

BIOFILM ECOLOGIST

Gas Technology Institute (GTI), the nation's premier, industry-led natural gas research and development organization located in the northwest suburbs of Chicago, Illinois, has an opportunity for a Biofilm Ecologist. Will be responsible for designing and executing tasks associated with all facets of corrosion and biofilm projects. Ph.D. with two to five years of postdoctoral experience in microbiology and biofilm studies strongly preferred. Prior industrial research and development experience desirable. GTI offers an excellent benefit and salary package. Visit us at **website: http://www.gastechnology.org** and forward your résumé to: **GTI, Attention: Human Resources Department, 1700 South Mt. Prospect Road, Des Plaines, IL 60018. FAX: 847-768-0798; e-mail: hr@gastechnology.org**. *Equal Opportunity Employer.*

Tenure-Track Faculty position, Microbial Pathogenesis, Yale School of Medicine

The Section of Microbial Pathogenesis of the Yale School of Medicine is seeking applicants for a tenure-track faculty position at the Assistant Professor level. We are seeking applicants who are conducting research in any area of microbial pathogenesis. Individuals interested in the cell biology or immunobiology of host/pathogen interactions are specially encouraged to apply. The position offers an attractive start-up package, excellent laboratory space and a stimulating scientific research environment. Candidates should have a Ph.D. and/or M. D. degrees, suitable postdoctoral research experience, a strong record of research accomplishments, a commitment to develop independent, innovative research programs, and an interest in graduate and medical education.

Applicants should submit, by **December 1st, 2002**, a curriculum vitae; a statement of current and future research interests, and arrange to have three letters of references sent to: **Chair, Search Committee, Section of Microbial Pathogenesis, Yale School of Medicine, Boyer Center for Molecular Medicine, 295 Congress Av. New Haven, CT 06536**. Applicants are encouraged to submit the applications package electronically (pdf file) to **microbial.pathogenesis@yale.edu.**

Women and members of underrepresented minority groups are encouraged to apply. Yale University is an Equal Opportunity/ Affirmative Action Employer.

Position Description
Director of Introductory Biology Teaching
Michigan State University, College of Natural Science

Michigan State University is launching a priority initiative in the teaching and learning of the biological sciences. The University is committed to strategically increasing our capacity to provide national leadership in the teaching and learning of the biological sciences at the undergraduate level, and in science education scholarship in the coming decades. We will build on our long-standing record of excellence in biological sciences teaching, as well as science education research, instructional development, and teacher education.

We seek a senior faculty candidate with research interests in biological science education to serve as Director of Introductory Biology Teaching within MSU's College of Natural Science (CNS). Academic appointment will be at the associate or full professor level, with tenure, in one or more of the following departments: Zoology, Plant Biology, Microbiology and Molecular Genetics, Physiology, the Lyman Briggs School (an undergraduate, residential liberal arts and sciences program within the College of Natural Science), or the Division of Science and Mathematics Education. All candidates are expected to have an earned doctorate in one of the biological sciences, science education, or a related field; a record of exceptional scholarly accomplishment through peer-reviewed publications; excellent interpersonal and leadership skills; and evidence of a capacity to contribute to the intellectual, research, and instructional mission of MSU.

Administrative duties of the Director of Introductory Biology Teaching will include providing leadership for the coordination, staffing, faculty professional development, oversight, and evaluation of the CNS-based introductory biology courses. This requires the administration of introductory and honors biology sequences, including laboratories, serving over 2000 students per year and involving faculty and teaching assistants from multiple departments and colleges. The candidate will have teaching responsibilities in the biological sciences, and will be expected to participate in departmental or school committee work. The Director of Introductory Biology Teaching will also be expected to provide science education leadership in the College's effort to build research and doctoral programs in this area by establishing a program of research in science education. In addition, there will be opportunities to supervise and mentor graduate and undergraduate students in science education and teach in the teacher education preservice and doctoral program.

A complete application package should include a cover letter; a curriculum vitae; two examples of representative peer reviewed publications; a statement of the candidate's vision of introductory biology education including comments on its relationship with the candidate's research agenda and trends in biological science teaching; and names and contact information for three letters of reference (two to address research, and one to address teaching). Candidates should indicate any initial preference of departmental placement in their cover letter. Review of applications will begin **November 1, 2002**. Submit application materials electronically or by mail to: **Dr. Douglas W. Estry, Associate Dean, College of Natural Science, Michigan State University, 103 Natural Science Building, East Lansing, MI 48824; biodir@msu.edu.**

MSU is an Affirmative Action, Equal Opportunity Institution.

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE

The Department of Biochemistry and the Center for Structural Biology at Vanderbilt University are seeking to fill two tenure-track faculty positions at any level as part of a new commitment to the success of biomolecular X-ray crystallography.

Building on its unique ability to carry out multi-disciplinary research on a single campus, Vanderbilt University is undergoing a vast transformation to push to the forefront of research in medicine and biology. The University is making an investment in excess of $100M over 5 years to bring in new faculty and enhance infrastructure, and Structural Biology has been targeted as a key area. Additional investments are being made in the areas of mass spectrometry/proteomics, biophotonics, and cryo-EM. Major initiatives are also underway in chemical biology, cancer biology and neuroscience.

The Center for Structural Biology provides a new organizational structure for faculty research groups, training programs, hiring, and instrumentation. Four Structural Biology faculty have been recruited in the past 3 years and a minimum of six additional faculty hires are planned for the next 2-3 years. Funds have been set aside to invest in acquisition of new local instrumentation as well as a significant portion of a synchrotron beamline for biomolecular X-ray crystallography. A very strong cluster computing facility has been assembled along with a high-end graphics facility. An outstanding biomolecular NMR facility with 5 new high field spectrometers is already in place.

We are in a position to recruit very aggressively with an outstanding package of start-up funds and infrastructure, as well as highly attractive salary and benefits. Researchers in areas that complement existing strengths in molecular toxicology, cancer biology and the cell cycle, DNA replication and repair, molecular neuroscience, and signal transduction are particularly encouraged to apply. Submit applications to: **The X-ray Crystallography Recruitment Committee, Vanderbilt University School of Medicine, Department of Biochemistry, 607 Light Hall, Nashville, Tennessee 37232-0146** or **marlene.jayne@Vanderbilt.edu**.

CALIFORNIA INSTITUTE OF TECHNOLOGY
Division of Engineering and Applied Science

The Division of Engineering and Applied Science at Caltech invites applications for a tenure-track positions at the Assistant Professor level.

We are seeking highly qualified candidates committed to a career in research and teaching with a research focus on fluid dynamics and a preference for experimental work. Interested candidates are asked to complete the on-line application summary at:

FLUID MECHANICS
http://www.galcit.caltech.edu/fluids-search

Candidates with a particular interest and research focus in environmental fluid dynamics are informed that a companion invitation for this area is available at:

ENVIRONMENTAL FLUID MECHANICS
http://www.eas.caltech.edu/env-fluids

Candidates with a research focus on large-scale atmosphere or ocean dynamics are encouraged to consult companion invitations at:

ATMOSPHERIC SCIENCE
http://www.gps.caltech.edu/positions/pos_asstprof_atmos.html

OCEANOGRAPHY
http://www.gps.caltech.edu/positions/pos_asstprof_ocean.html

Initial appointments at the Assistant Professor level are for four years and contingent on completion of the PhD degree. Exceptionally qualified applicants at the associate or full professor level are also encouraged to apply.

CALTECH DIVISION OF ENGINEERING & APPLIED SCIENCE

Caltech is an Equal-Opportunity/Affirmative-Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

The Jessie Boden Lloyd Professorship in Immunology Research

UNIVERSITY OF CALGARY

Creating the future of health.

The **Faculty of Medicine** invites applications and nominations for The Jessie Boden Lloyd Professorship in Immunology Research. The successful candidate will be a distinguished scholar with an international or national reputation in immunology research, and will provide leadership to build an independent program in immunological research, as well as attract outstanding scholars in this field.

With over 400 full-time members, the Faculty of Medicine is a leader in health research with an international reputation for excellence and innovation. Over the past 10 years, external research funding has doubled, with growth of 34% in the past two years alone. A new research facility slated to open in 2004 will double the Faculty's research space, and allow researchers to investigate scientific questions collaboratively in a unique setting that facilitates multidisciplinary studies with state-of-the-art investigative tools. Calgary is a vibrant, multicultural city of ~1,000,000 near the Rocky Mountains, Banff National Park and Lake Louise.

Please submit a curriculum vitae, a statement of research interests and goals, and the names of three referees by **November 30, 2002**, to:

Dr. D.G. Gall
Dean, Faculty of Medicine
Chair, Selection Committee
3330 Hospital Drive N.W.
Calgary, Alberta, Canada T2N 4N1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.
The University of Calgary respects, appreciates and encourages diversity.

www.ucalgary.ca

FACULTY POSITIONS

FACULTY POSITION
Biological Sciences

The Department of Biological Sciences at the University of Pittsburgh invites applications for four full-time tenure-track faculty appointments. Our department has a broad-based, interactive group of researchers whose interests encompass nearly every area of modern biology. We are seeking colleagues from any discipline; those with interests in gene expression, chromatin structure/function, genomics, cell or developmental biology, biochemistry or biophysics are especially encouraged to apply. These appointments are expected to be made at the **ASSISTANT PROFESSOR** level, but experienced candidates with outstanding records will be considered for appointment at higher ranks. The successful candidate must have a Ph.D. and extensive postdoctoral experience and will be expected to establish an extramurally funded research program, train graduate students, and participate in undergraduate education. Appointments are anticipated to begin in September 2003, pending budgetary approval. To ensure full consideration, applications should be received by November 22, 2002. Applicants should send a curriculum vitae along with a summary of research interests and goals as a single electronic document (PDF format preferred) to **biojobs@pitt.edu**. In addition, applicants should arrange to have at least three letters of reference sent to:

Search Committee
Department of Biological Sciences
University of Pittsburgh
Pittsburgh, PA 15260
(412) 624-4266

Further information on the Department of Biological Sciences is available at: **http://www.pitt.edu/~biology**.

The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

PURDUE UNIVERSITY

Position Announcement
HEAD, DEPARTMENT OF FOOD SCIENCE
PURDUE UNIVERSITY

Candidates must have visionary leadership skills, a strong record of research and scholarly achievement, proven adminstrative skills, and a commitment to innovation and excellence in research, teaching, extension, and engagement activities. Excellent communication skills are required to interact with stakeholders in food and related industries and to proactively pursue new opportunities from a variety of sources. The incumbent will also be expected to engage with local companies in support of opportunities to position industries for successful participation in the Indiana and global economy. Interest and experience in international dimensions of the discipline and a commitment to diversity are highly desired. The candidate must have an earned doctorate or equivalent degree in Food Science or a related field. Applicants must be eligible for tenure at the rank of professor, and may have experience in academia, industry, or government.

Qualified persons are requested to submit the following: letter of application; a statement of their vision of food science with regard to future needs for research, teaching and engagement; statement of administrative philosophy; and complete curriculum vitae, including names, addresses, telephone and fax numbers, and e-mail addresses of five references. The search committee will begin to review applicant files on December 9, 2002 and will continue to review applications until a suitable candidate is identified. Nominations of potential candidates for the position are welcome. Applications, nominations, and inquiries should be addressed to: **Vic L. Lechtenberg, Dean of Agriculture, Food Science Head Search, Purdue University, Agriculture Administration Building, 615 W. State St., West Lafayette, IN 47907-2053, Phone: (765) 494-5456, Fax: (765) 494-7420, E-mail: vll@purdue.edu**.

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

CHAIR DEPARTMENT OF CELL BIOLOGY

LERNER RESEARCH INSTITUTE
THE CLEVELAND CLINIC FOUNDATION

We are seeking a Chair for the Department of Cell Biology which occupies ~20,000 sq. ft. in the Lerner Research Institute. An endowed chair accompanies this position. The department currently consists of 16 faculty members with well-funded research programs in the areas of control of gene expression; translational and post-translational modifications of proteins; intracellular signaling and secretory pathways; mechanisms of atherosclerosis; lipoprotein metabolism of the cytoskeleton; and blood and vascular cell biology. The ideal applicant for this position will have an outstanding national reputation in an area that complements the strengths of the department. The Lerner Research Institute with over 130 independent investigators in 8 departments and an annual budget of greater than $100 million has a commitment to excellence in basic and translational research. The Chair will be provided with a highly competitive salary, generous start-up support, and recruitment packages for new faculty. A curriculum vitae and the names and addresses of three references should be sent to:

Edward F. Plow, Ph.D.
Search Committee for the
Chair of Cell Biology
Department of Molecular Cardiology – NB50
Cleveland Clinic Research Institute,
9500 Euclid Avenue
Cleveland Ohio 44195

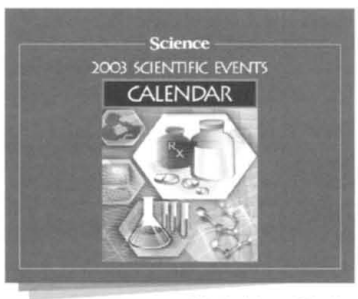
Visit us on the Web at
http://www.lerner.ccf.org/cellbio

E-mail: plowe@ccf.org

The Cleveland Clinic Foundation is an Equal Opportunity Employer.

THE CLEVELAND CLINIC FOUNDATION

Will your event be listed in *Science's* 2003 Events Calendar?



Calendar being published by *Science* Business Office.

The 2003 Scientific Events Calendar will be published in our 13 December 2002 issue. Deadline for submissions is 8 November 2002. This calendar reaches nearly 800,000[1] *Science* readers who could be potential delegates, exhibitors, and sponsors for your event.

To submit a free listing go to **www.sciencemeetings.org** or call your *Science* sales representative for more information on multiple listings and advertising in this year-round resource.

1 *Science* Harvey Research Readership surveys: 14 January 2000, 4 February 2000, 4 June 1999 (Japan) as applied to *Science* December 2001 BPA Publisher's Statement, publisher's own data.

For full details contact:
In the U.S. ..... Kathleen Clark
phone 202-326-6555
fax 202-289-6742
e-mail ..... kclark@aaas.org

In Europe ..... Richard Walters
phone ..... +44 (0) 1223 326 500
fax ..... +44 (0) 1223 326 532
e-mail .. rwalters@science-int.co.uk

Science@
www.sciencemeetings.org
AAAS

USD THE UNIVERSITY OF SOUTH DAKOTA — CARDIOVASCULAR RESEARCH OPPORTUNITIES

The Cardiovascular Research Institute of The University of South Dakota will be expanding its research program in **Sioux Falls, SD**. Sioux Falls is frequently recognized as one of the most livable cities in the US. Named "America's Best Place to Live" by Money Magazine in 1992, Sioux Falls has a population of approximately 150,000. Ongoing research at the CRI is largely focused on the cellular and molecular mechanisms of congestive heart failure. We are committed to building a nationally recognized center for cardiovascular disease research. Additional information about our current faculty and their research can be obtained at our Web site **http://med.usd.edu/cvresearch/**.

TENURE TRACK FACULTY POSITIONS

Applications are invited for 2 faculty positions at the **ASSISTANT, ASSOCIATE**, or **PROFESSOR** levels. New recruits are expected to establish independent, extramurally funded research programs that complement ongoing work at the CRI. Applicants with expertise in cell biology, molecular biology, and/or signal transduction are of particular interest. Applicants for more senior level positions should have extramural funding. Applicants must have a PhD/MD or equivalent degree and a minimum of 2 years of postdoctoral experience. Competitive salaries, startup funds, and lab space will be provided.

ACADEMIC CARDIOLOGIST

Applications are invited for an **ACADEMIC CARDIOLOGIST** with interests in basic mechanisms of heart failure and/or clinical trials related to heart failure. This will be a **TENURE TRACK POSITION** at the **ASSISTANT, ASSOCIATE,** or **PROFESSOR** level. This position offers guaranteed protected research time, research salary support, lab space, and a generous startup package. Applicants must have a MD and be certified to practice medicine in the US.

POSTDOCTORAL/GRADUATE STUDENT FELLOWSHIPS AND RESEARCH ASSOCIATES

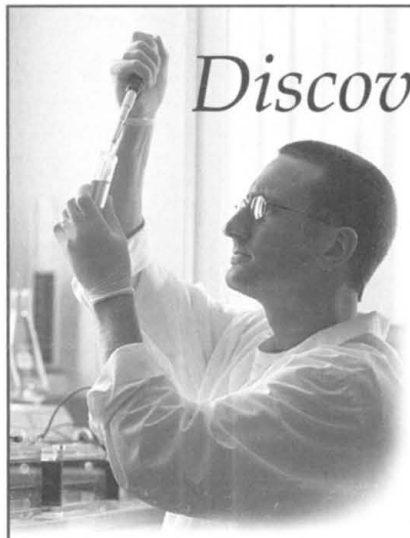
Applications are invited for several **POSTDOCTORAL** and **GRADUATE STUDENT FELLOWSHIPS**. These individuals will train with existing faculty and new faculty recruits in an environment that stresses an interdisciplinary approach to cardiovascular research. **PhD/MD** or equivalent required for **POSTDOCTORAL** positions and an undergraduate degree required for **GRADUATE STUDENT FELLOWSHIPS** and **RESEARCH ASSOCIATES**. Prior research experience desirable. Salary is commensurate with qualifications and experience.

Application Directions: Applicants should submit: a letter of interest stating which position they are applying for, a curriculum vitae, and 3 letters of reference.

Application Deadline: Applications will be accepted until the positions are filled. Review of applications will begin on November 20, 2002. Submit to:

A. Martin Gerdes, PhD, Director
e-mail mgerdes@usd.edu
Cardiovascular Research Institute
University of South Dakota
School of Medicine
1400 W 22nd Street
Sioux Falls, SD 57105

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



Discover the Future with Incyte.

Incyte is looking for Scientists to staff our new facilities in Newark, Delaware.

For more than a decade, Incyte has laid the groundwork for drug discovery by creating the world's most extensive databases of novel content. We have the largest collection of full-length genes anchored to the genome and linked to comprehensive expression, annotation, and genetic information for researchers looking for novel molecular approaches to disease prevention. You will have access to our superior technology and the richest portfolio of patents and applications in the world. Incyte will lead the way to the future by leveraging its genomic information to discover cures for the diseases that afflict humanity. We are recruiting personnel to take us to the next step — the conversion of our proprietary genes and information into drug candidates.

Senior Research Scientist/Principal Research Scientist

We have an opening in our Drug Discovery, Applied Technology Group for an independent scientist who is experienced in all phases of protein X-ray crystallography and novel structure determination. The successful candidate will initiate structural biology efforts in support of small-molecule drug discovery programs. The ability to effectively communicate results and interact in a team-oriented fashion is necessary. Experience in protein chemistry is a plus. A PhD and several years postdoctoral experience is required. Job Code: LL6170RW

Senior Staff Scientist/Staff Scientist

We have an opportunity for a scientist who is skilled in all phases of protein purification and characterization to join our Drug Discovery, Applied Technology Group. Experience in cloning, protein expression, assay development and/or protein crystallization is a plus. The successful candidate will support structural biology and high throughput screening efforts in a team-oriented fashion. A BS or MS degree in Biochemistry or a related field and several years experience is required. Job Code: LL6171RW

At Incyte, your work will be valued and rewarded. We provide an outstanding benefits package. We work in an environment where excitement, dedication and cooperation are constantly renewed. Above all, you will experience the promise and thrill of discovery. Please send your resume, indicating the appropriate Job Code number, via email to Incyte Genomics, Inc. at sciencemag@incyte.com. EOE F/M/V. Incyte Genomics is proud to be an Equal Opportunity Employer and recognizes the talent of its diverse workforce. Please visit our website at www.incyte.com for more information.

IncyteGenomics

Discover the Future with Incyte.

Agricultural Research Service

PLANT PHYSIOLOGIST/RESEARCH CHEMIST, GS-12

U.S. Department of Agriculture, Agricultural Research Service (ARS) is seeking to fill a permanent full-time scientist position at the Plant Protection Research Unit (PPRU), in Ithaca, NY. The candidate will serve as a team leader or team member of a project involved in developing approaches to biological control of invasive weed species with emphasis on Purple Loosestrife. The work requires comprehensive knowledge of plant physiology, plant biology, and chemistry including molecular and genomics technologies. Knowledge of entomology, plant ecology, weed science, and plant pathology is also desirable.

Salary range is $54,275 to $70,555 per annum. U.S. citizenship is required. Applications must be marked **ARS-X3E-3018** and postmarked by **November 18, 2002**. For more detailed information, visit the ARS website at: **http://www.afm.ars.usda.gov/divisions/hrd/index.html**. For specific information, contact **Dr. Bill Brodie at 607-255-2458**.

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

BioArray Solutions

Director/VP of Assay Development

The Director/VP will lead our programs of developing and manufacturing proprietary assay designs for DNA as well as protein analysis in a proprietary BeadChip format. Appointment at the Director or VP level will be considered.

To provide leadership at the interface between assay development and QSR-compliant manufacturing, the successful candidate will demonstrate technical excellence in biochemistry or molecular biology based on a minimum of seven years of post-Ph.D. experience, thorough familiarity with FDA regulations, and a proven track record of assay commercialization.

Research Scientist

Research Scientist to join BioArray Solutions' program of assay development for molecular diagnostics using proprietary BeadChip technology. Recent Ph.D. in Molecular Biology or related disciplines, along with postdoctoral training providing a strong background in molecular biology/biochemistry, will be required; direct experience with genotyping and microarray technologies will be preferred.

An attractive compensation package will include options and extensive benefits commensurate with background and experience.

BioArray Solutions (**www.BioArrayS.com**), is a development-stage company in New Jersey.

Send materials to: **jobs@bioarrays.com** or **(908)222-0706 (fax)**.

Director of the Gaylord Nelson Institute for Environmental Studies

The University of Wisconsin-Madison, a major land-grant university committed to excellence in teaching, research and public service with a budget of $1.6 billion, student body of approximately 40,000 and faculty/staff of 20,000, invites nominations and applications for the position of director of the Gaylord Nelson Institute for Environmental Studies.

The director of the Nelson Institute, a member of the Deans' Council, reports to the chancellor and the provost, and provides general leadership and coordination in the broad area of environmental studies through the promotion of faculty collaboration and initiatives in interdisciplinary environmental scholarship and instruction.

The Nelson Institute, established in 1970, is an independent division of the university with the mission to promote understanding of the environment and to define and solve environmental problems and issues through leadership in interdisciplinary instruction, research, and outreach at all levels, from campus to global. Approximately 150 faculty members from more than 50 natural and social science, engineering, and humanities departments across the campus are affiliated. Besides offering more than 100 courses in partnership with the university's schools and colleges, the Nelson Institute administers four graduate degree programs (in conservation biology and sustainable development, environmental monitoring, land resources, and water resources management), two graduate-level certificate programs (in air resources management, and energy analysis and policy) and an undergraduate certificate program (in environmental studies). Total enrollment in the graduate programs is approximately 200 students; enrollment in the undergraduate program averages approximately 300. The Nelson Institute is the administrative home for three interdisciplinary research centers (the Center for Climatic Research, Environmental Remote Sensing Center, and Center for Sustainability and the Global Environment), and conducts a variety of outreach activities.

Please see the following web sites for information about UW-Madison and the Nelson Institute:

http://www.ies.wisc.edu/ http://chronicle.com/jobs/profiles/3964.htm http://www.wisc.edu/

Candidates will be evaluated on the following professional and personal characteristics: commitment to the institute's mission, as well as to maintain and extend the scholarly values, academic breadth, and the diverse missions of a public research university through interdisciplinary scholarship and teaching; outstanding leadership qualities including a record of successful leadership in higher education; collaborative leadership style; commitment to shared governance with faculty, staff and students; desire and ability to advance interdisciplinary environmental teaching, research, and public service; commitment to pursue and secure funding from public and private sources; ability to work with external constituencies including state and federal government, business, non-profit agencies, and community; a commitment to public service through dissemination of research results, support of the state's environmental interests, and support of the Wisconsin Idea. Candidates must possess a record of academic scholarship and teaching that qualifies them for tenure at the level of full professor at UW-Madison. In keeping with the university's goals and objectives, candidates will also be evaluated on their demonstrated commitment to the diversity of students, faculty and staff, to equal employment opportunity, affirmative action and non-discriminatory practices, and to advancing an inclusive climate that stimulates diversity.

Applications and nominations must be received by 30 November 2002 to ensure consideration. Later applications and nominations may also be considered. The committee strongly encourages applications and nominations of women and persons of underrepresented groups. Applicants should include a current resume or curriculum vitae and a comprehensive cover letter that addresses how their strengths and experience match the qualifications for the position, and what they would see as challenges and opportunities of the position, as well as the names, addresses, e-mails, and telephone numbers of five references. Candidates will be informed before references are contacted. Please note that in accordance with Wisconsin statutes the names of nominees and applicants who explicitly request confidentiality will not be made public. However, the university is required to release the names and titles of the finalists who will be interviewed by the chancellor. Submit applications and nominations to: **Professor Brent McCown, Chair, Gaylord Nelson Institute for Environmental Studies Director Search and Screen Committee, 133 Bascom Hall, 500 Lincoln Drive, Madison, WI 53706-1380; 608-262-1677; Confidential FAX: 608 265-7806.**

The University of Wisconsin-Madison is an Equal Opportunity, Affirmative Action Employer.

Elements of AAAS Science & Technology Policy Fellowships 2003:04

He
help shape science and technology policy

Op
a great opportunity for accomplished and societally-aware scientists and engineers

Co
contribute scientific and technical information

Le
learn how government works

Un
a unique and prestigious participatory experience

He **Help** shape science and technology policy in Washington, DC. Contribute scientific and technical information and external perspectives to federal decision-making, while learning how government works. The AAAS fellowship programs provide a unique participatory public policy experience for scientists and engineers, through one-year assignments involving domestic and international science policy issues in the Congress and several executive branch agencies. Stipends begin at $58,000.

Ap **Applicants** must have a PhD or an equivalent doctoral-level degree by the application deadline from any physical, biological or social science, any field of engineering, or any relevant interdisciplinary field. Individuals with a master's degree in engineering and at least three years of post-degree professional experience also may apply. U.S. citizenship is required. Federal employees are not eligible. Approximately 50 fellowships are awarded in nine different programs. Underrepresented minorities and persons with disabilities are encouraged to apply.

Be The fellowship year **begins** September 1, 2003. Fellows attend a two-week orientation before beginning their assignments and participate in a year-long seminar series on topics relevant to science, technology and public policy. Application deadline is January 10, 2003.

Pl Fellows are **placed** in the Congress, the National Science Foundation, the National Institutes of Health, the Department of State, the Department of Defense, the Agency for International Development, the Environmental Protection Agency, the Department of Agriculture, the Food and Drug Administration and other federal offices.

AAAS

Advancing science • Serving society

Op AAAS sponsors these programs to provide the **opportunity** for accomplished and societally-aware scientists and engineers to participate in and contribute to the public policy making process of the federal government. The programs include:

- Congressional Fellows
- Diplomacy Fellows
- AAAS/NIH Science Policy Fellows
- AAAS/NSF Science and Engineering Fellows
- Defense Policy Fellows
- Environmental Fellows
- AAAS/NTI Fellows in Global Security
- Roger Revelle Fellows in Global Stewardship
- Risk Policy Fellows in Health, Safety and the Environment

In For application **instructions** and further information:
AAAS Science and Technology Policy Fellowship Programs
1200 New York Avenue, NW
Washington, DC 20005
Phone: 202/326-6700
E-mail: science_policy@aaas.org

www.fellowships.aaas.org
American Association for the Advancement of Science

Department of Health and Human Services National Institutes of Health Clinical Center

The Nuclear Medicine Department, a major research component of NIH and the Department of Health and Human Services, is recruiting for a Ph.D. graduate to work with studies of human repair mechanisms for radiation-damaged DNA as they relate to genetic instability, mutagenesis, and amenability to manipulation for therapeutic intervention of disease. Emphasis is upon radionuclide-mediated induction and repair of site-specific DNA double strand break damage.

Applicants should be US citizens or permanent residents and possess a recent Ph.D. (less than 3 years postgraduate) with a strong background in biochemistry, molecular biology, and an emphasis on DNA chemistry and metabolism. Knowledge of radiobiology, DNA repair, and proteomics are a plus. Submit resumes to:

Thomas A. Winters, Ph.D.
Nuclear Med Department
National Institutes of Health
Building 10, Room 1C401
10 Center Drive, MSC 1180
Bethesda, MD 20892-1180
e-mail: twinters@mail.cc.nih.gov

HHS and NIH are Equal Opportunity Employers

ASPET
American Society For Pharmacology and Experimental Therapeutics

NEW FUNDING OPPORTUNITY

ASPET-Merck Postdoctoral Fellowships in Integrative Pharmacology

The ASPET-Merck Postdoctoral Fellowships in Integrative Pharmacology support post-doctoral training of scientists (M.D., Ph.D., or related degree) with demonstrated interest in *in-vivo* pharmacology.

The major goal is to increase the number of well-trained scientists with expertise in pharmacology and in systems and integrative biology. The majority of the Fellowship will be spent in the laboratory of the academic supervisor/mentor with no less than six months spent in the laboratories of the award sponsors, Merck Research Laboratories. Fellowships are for early post-doctoral training and applicants with significant post-doctoral training at the time of application will not be considered. The academic institution must be in the United States.

Three awards will be made in 2003. One award will be made to support training in each of the designated areas of scientific research:

- Imaging
- Behavioral Pharmacology or Neuropharmacology
- Metabolic Disorders (emphasis on obesity, diabetes, or atherosclerosis)

The fellowship term is 3 years, subject to annual performance review, and provides the following per annum funding:

- $42,000 stipend
- $3,000 travel expenses
- $10,000 institutional allowance

During tenure at the Merck laboratory, additional support up to $10,000 per fellow will be available to offset expenses related to the temporary relocation.

Application deadline is January 17, 2003. Recipients will be notified mid-March. Fellowships must begin in 2003. For application forms and more information on eligibility, review procedure and awards, visit the American Society for Pharmacology and Experimental Therapeutics web site at **WWW.ASPET.ORG**. Applications are open to qualified members of any professional society but recipients of awards must be or become members of ASPET.

ROSETTA INPHARMATICS

Rosetta Inpharmatics, a wholly owned subsidiary of Merck & Co. Inc., develops and implements technologies that will improve drug discovery. The company's leading-edge genomic research and data analysis efforts focus on how medical compounds affect biology, enabling more accurate selection of drug targets and more efficient drug development. We currently are recruiting for the senior positions on the following teams.

MOLECULAR PROFILING

Molecular Profiling team serves as the liaison between Rosetta Inpharmatics and the scientists at Merck & Co., Inc. on specific programs. This team of exemplary scientists works closely with scientists in the various therapeutic areas of Merck Research Laboratories to apply genomic and other emerging technologies in new ways to accelerate the discovery and development of new drug compounds.

Program Lead Scientists:
Toxicology/Drug Metabolism/Molecular Profiling
Molecular Pharmacology/Drug Metabolism

Associate Director/Director:
Clinical Molecular Profiling, MD/PhD

Senior Statistical Geneticist

INFORMATICS

The Informatics team at Rosetta is rich in talented scientists specializing in mathematical and statistical modeling, algorithm development, data analysis, computational genomics, statistical genetics, and experiment design. Members drive a variety of cutting-edge research projects poised to revolutionize the drug discovery process. Using expression arrays, proteomics, and other data, effects of genetic and chemical influences in the cell are being decoded in detail to improve the success rate for new compounds and lay the foundation for personalized medicine.

Senior Research Scientists:
Transcriptome Discovery and Analysis
Target Characterization and Prioritization
Coherent Data Integration for Molecular Profiling
Pathway Reconstruction and Representation

Data Analyst

For more information, please visit our website.
www.rii.com

ROSETTA INPHARMATICS
A wholly owned subsidiary of Merck & Co., Inc.

ASSISTANT PROFESSOR BIOLOGY

The University of Southern Indiana invites applications for a tenure-track position at the Assistant Professor level in biology to begin August 2003. Successful candidates will be broadly trained Microbiologists with a strong background in prokaryotic systems. Teaching responsibilities will include microbiology for biology majors, medical microbiology, principles of biology, and a course in their area of expertise. Ability to develop a course in microbial ecology or environmental microbiology is preferred. Candidates with college/university teaching experience are desirable. Excellence in undergraduate teaching supported by involvement of students in candidate's professional/research activities is expected. A Ph.D. required; exceptional A.B.D. considered.

The University is committed to excellence in teaching, scholarship, and professional activity and service to the University and community. The Biology Department is housed in recently renovated laboratory space, provides dedicated undergraduate research space, and will expand into an added science wing in fall 2003. For additional information, see **website: http://www.usi.edu/science/biology/index.htm**. Application deadline is November 30, 2002, but applications will be considered until the position is filled. Submit letter of application including statement of teaching philosophy, research goals, curriculum vitae, and three letters of reference to: **Dr. Henri Roger Maurice, Chair, Department of Biology, University of Southern Indiana, 8600 University Boulevard, Evansville, IN 47712**. *University of Southern Indiana is an Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION HIV Research

The University of Pennsylvania Center for AIDS Research (CFAR) invites applications for a tenure-track faculty position in HIV/AIDS research. Faculty appointment will be **ASSISTANT, ASSOCIATE,** or **FULL PROFESSOR** in an appropriate department in the School of Medicine. Rank will be commensurate with experience. We seek outstanding candidates to develop independent research programs in patient-based laboratory research, targeting the areas of cellular immunology, developmental therapeutics, and/or other types of translational research. The Penn CFAR has an outstanding clinical population for such studies as well as strong cores in clinical, virology, molecular, immunology, and other support areas. The University of Pennsylvania has a broad base of AIDS Investigators with vigorous programs in virology, pathogenesis, and immunology; an active ACTU; and a broad range of graduate programs. Brand-new laboratory space is adjacent to a large group of established HIV Investigators. Please send a cover letter, curriculum vitae, and two-page research summary to: **Dr. Ron Collman, CFAR Search Committee, 22 Johnson Pavilion, University of Pennsylvania School of Medicine, Philadelphia, PA 19104-6060. E-mail: collmanr@mail.med.upenn.edu**.

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

POSTDOCTORAL POSITIONS Immunology

Applications are invited for a Postdoctoral Fellow position to investigate the role of dendritic cells in peripheral tolerance and induction of regulatory T cells. Candidates should possess a Ph.D. and/or M.D. degree and experience in cellular and molecular immunology (see **website: http://www.missouri.edu/mmiwww/hz.htm**). Submit curriculum vitae and the names of three references to: **Professor Zaghouani, University of Missouri, School of Medicine, Department of Molecular Microbiology and Immunology, M616 Medical Sciences Building, Columbia, MO 65212 U.S.A. E-mail: zaghouanih@health.missouri.edu**.

To request Americans With Disabilities Act accommodations, please Telephone: 573-884-7278 (voice/TTY).

POSITIONS OPEN

EVOLUTIONARY BIOLOGIST AND DIRECTOR Museum of Zoology and Herbarium University of Michigan

Applications are solicited for the new position of Director of the University of Michigan Museum of Zoology and Herbarium. The Director will have responsibility for the administration of the two museums and academic leadership regarding the role and use of museums in contemporary biology. Candidates should combine strong research skills in evolutionary biology of animals or plants with academic administrative leadership ability and excellence in teaching. The Director will have a joint appointment with tenure in the newly formed Department of Ecology and Evolutionary Biology. Applications are welcomed from individuals whose research is in any area of evolutionary botany or zoology including systematics, phylogeography, and evolutionary genetics or genomics. Teaching responsibilities will include at least one course in the individual's area of expertise.

To apply, please send curriculum vitae, brief summaries of present and future research plans and teaching interests, copies of three publications, and contact information for three references to: **Chair, Director Search Committee** at either the **Museum of Zoology, 1109 Geddes Avenue, University of Michigan, Ann Arbor, MI 48109-1079** or the **Herbarium, 3600 Varsity Drive, University of Michigan, Ann Arbor, MI 48108-2287**. Review of applications will begin 18 November 2002. *The University of Michigan is a nondiscriminatory Affirmative Action Employer. Women and minorities are encouraged to apply. Applicants should note that the University is responsive to the needs of dual-career couples.*

PHYSIOLOGIST The University of New Mexico School of Medicine

Applications are solicited for a tenure-track faculty position at the **ASSISTANT/ASSOCIATE/FULL PROFESSOR** rank. Applicants must have a Doctoral degree or equivalent and have completed postdoctoral training. Preference will be given to candidates with demonstrated productivity as evidenced by extramural grant support and by a strong publication record. The successful applicant is expected to sustain an active research program in physiology employing contemporary techniques and to interact with existing programs in vascular smooth muscle regulation and endothelial cell physiology. Special consideration will be given to candidates with interests in blood pressure regulation, microvascular circulation, and electrophysiology and signal transduction in vascular tissue, although other areas of physiology will be considered. Preference will be given to individuals with demonstrated quality and relevance of training and experience and experience in teaching medical and graduate students. For best consideration, applicants must submit curriculum vitae; a short description of their research program; and the names of three references by December 15, 2002, to: **Nancy L. Kanagy, Ph.D., Associate Professor of Cell Biology and Physiology, University of New Mexico School of Medicine, Albuquerque, NM 87131-5218**.

POSTDOCTORAL FELLOWSHIP is available immediately to study nuclear function and gene expression. The project will focus on the regulation of nuclear function by lipid mediators. This three-year NIH-funded appointment offers interdisciplinary training in a world-class research environment. The ideal candidate has a strong background in cellular or molecular biology as applied to nuclear function. *Also, this training program is restricted to United States citizens or permanent residents of the United States.* Submit curriculum vitae with names of three references to: **Thomas G. Brock, Ph.D., Internal Medicine, University of Michigan, Ann Arbor, MI 48109-0642. E-mail: brocko@umich.edu**. *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR Molecular Cell Biology

The Department of Biological Sciences at Ohio University seeks to fill a full-time tenure-track position at the **ASSISTANT PROFESSOR** level in molecular cell biology beginning fall 2003. We seek candidates who use molecular approaches to address fundamental questions in cell biology. A Doctorate in cell biology or a related area, postdoctoral research experience, and evidence of scholarly research achievement are required. Candidates are expected to develop an independent, fundable research program. Strong institutional research support includes a new, 70,000 square foot life sciences building, a transgenic mouse facility, scanning and transmission electron microscopes, a confocal microscope, NMR and mass spectrometers, and a fluorescence-activated cell sorter. The successful applicant will teach undergraduate cell biology and an upper-level course, preferably in immunology or virology. Salary, benefits, and start-up funds are competitive. Further information about these positions can be found at **websites: http://www.biosci.ohiou.edu** and **http://www.cas.ohiou.edu**. Please submit a letter of application; curriculum vitae; summaries of research program and teaching interests/philosophy; and the names, postal addresses, e-mail addresses, and telephone numbers of three references to: **Dr. Ellengene Peterson, Department of Biological Sciences, Ohio University, Irvine Hall, Athens, OH 45701-2979**. Review of applications will begin on December 3, 2002. *Ohio University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are especially encouraged to apply.*

ASSISTANT PROFESSOR INFECTIOUS DISEASES Washington University School of Medicine

The Division of Infectious Diseases in the Department of Medicine at Washington University School of Medicine solicits applications for tenure-track appointments at the rank of Assistant Professor. We are seeking interactive individuals who will be able to establish a vigorous and outstanding independent basic research program. Our program has a strong emphasis on microbial pathogenesis in prokaryotic, viral, and eukaryotic systems. Recruited faculty will be located contiguous to the Department of Molecular microbiology and the Division of Pediatric Infectious Diseases; there is tremendous potential for collaborative interactions. Preference will be given to academic physicians who are Board-eligible/Board-certified in infectious diseases. Very attractive start-up packages and protected time arrangements will be offered. Applicants should send detailed curriculum vitae, a few selected reprints, a brief description of current and planned research interests, and arrange to have three letters of reference sent to: **Daniel E. Goldberg, M.D., Ph.D., Codirector, Division of Infectious Diseases, Attention: Faculty Search Committee, Washington University School of Medicine, Campus Box 8230, 660 South Euclid Avenue, St. Louis, MO 63110**. *Washington University Medical School is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.*

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE positions. The Center for Fluorescence Spectroscopy is expanding its research effort on the interaction of fluorophores with metallic particles, which represents a new fluorescence technology. Positions are available for individuals with a Ph.D. and experience in biochemistry, DNA analysis, fluorescence sensing, or surface chemistry. All applicants should have a deep interest in applying state-of-the-art fluorescence methods to biomedical research.

Appointments may be at the Postdoctoral or Research Associate level. Applicants should forward curriculum vitae, three letters of recommendation, and at least three reprints to: **Search Committee, c/o Dr. Joseph R. Lakowicz, University of Maryland at Baltimore, Center for Fluorescence Spectroscopy, Department of Biochemistry and Molecular Biology, 725 West Lombard Street, Baltimore, MD 21201**.

Bioinformatics in Aging Research at the University of Michigan

The University of Michigan is building a multidisciplinary Program in Bioinformatics (**http://www.bioinformatics.med.umich.edu**) bringing together advanced computational technology and experimental biosciences. In particular we are recruiting candidates with interests in the application of bioinformatics to analyze the genetics and science of aging. Integrated experimental and computational approaches are encouraged. The candidate will be a member of the Geriatrics Center and the Bioinformatics Program. The University of Michigan is one of the world's finest research institutions with an energetic community of students, scholars, and scientists. Major NIA-funded core grants in geriatrics and in basic aging research provide an exceptionally rich environment for biogerontology. The Bioinformatics Program has close connections with clinical and basic science departments within the Medical School. Successful candidates will be expected to develop an innovative research program related to genetics and systems analysis of aging, and to share in the teaching and administrative functions of the Bioinformatics Program. Candidates should send a biographical sketch, three letters of recommendation, research plan and a statement of career goals to:

Richard Miller, Geriatrics/Bioinformatics Search
CCGCB Room 5316 Box 0940
University of Michigan Medical School
Ann Arbor, MI, 48019-0940, USA

The University of Michigan is an Equal Opportunity Employer and is committed to maintaining diversity in its hiring and training programs.

Cell and Molecular Biology of Aging at the University of Michigan

University of Michigan Health System
The Geriatrics Center

The University of Michigan Geriatrics Center is seeking applications for tenure track faculty positions from MD or PhD scientists who wish to develop independent research programs in the molecular biology of aging and its relationship to late life diseases. The initial appointment will probably be at the level of Assistant Professor. Our principal selection criterion will be the likelihood that the faculty member will be able to develop a nationally prominent research program that uses methods in modern cell biology, genetics, and/or molecular biology to solve important problems in the biology of aging and the relationship between aging and late life diseases. The University of Michigan provides an exceptionally strong environment for aging research, including both a Claude Pepper OAIC and a Nathan Shock Center for the Biology of Aging, as well as an NIA Training Grant and numerous program project and research grant awards that provide support for pilot projects and opportunities for collaboration. Candidates should submit a CV, a brief (1 – 2 page) description of research interests, and contact information for 3 – 5 senior scientists who could provide letters of recommendation, to:

Richard Miller, Biogerontology Search
CCGCB Room 5316 Box 0940
University of Michigan Medical School
Ann Arbor, MI, 48019-0940, USA

The University of Michigan is an Equal Opportunity Employer and is committed to maintaining diversity in its hiring and training programs.

Department of Health and Human Services National Institutes of Health Warren Magnuson Clinical Center

The Positron Emission Tomography (PET) Department of the Warren G. Magnuson Clinical Center, National Institutes of Health, Department of Health and Human Services, Bethesda, MD, is seeking a physician with extensive clinical, research, and management experience in PET to serve as the Deputy Director for Clinical Applications. The PET Department presently has 3 cyclotrons, 3 PET scanners, and oversees numerous active protocols employing various combinations of their IND radiopharmaceuticals. The incumbent will coordinate the operation of existing imaging technology and the development of advanced experimental imaging applications. Familiarity with all aspects of PET from cyclotron operation, to radiotracer production, to pre-clinical and clinical studies is required. Salary and resources are negotiable and commensurate with experience.

Please submit your curriculum vitae, bibliography, and a letter describing your clinical, research, and management experience to: **Ms. Gwen Shinko, HR Specialist, OHRM/CC/NIH, 6100 Executive Blvd., Rm. 3E01, MSC-7509, Bethesda, MD 20892-7509. Phone no. 301-496-6924. Email: gshinko@nih.gov**.

For priority consideration, application packages should be submitted as early as possible, but no later than **December 15, 2002**.

NIH is an Equal Opportunity Employer. Selection for this position will be based solely on merit, without discrimination for non-merit reasons such as race, color, religion, sex, national origin, politics, marital status, sexual orientation, physical or mental disability, age or membership or non-membership in an employee organization.

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MAYO CLINIC

Hematologist Oncologist
Rochester, Minnesota

The Department of Hematology and Internal Medicine is seeking a **BC/BE Hematologist Oncologist** with laboratory-based research experience related to multiple myeloma, with particular focus on bone marrow microenvironment and bone marrow angiogenesis. Laboratory experience in the use of replicating viral vectors for cancer therapy is desirable. The applicant must be experienced in clinical trial design and conduct and in the care of patients with multiple myeloma and amyloidosis. The individual should have a proven track record in blood and marrow transplantation related research. Formal training in clinical research is a requisite.

Salary will be determined by the successful candidate's experience. There is an attractive benefits package. Mayo Clinic Rochester is a non-profit, physician led, clinical practice integrated with education and research in a unified multi-campus system.

Submit curriculum vitae and copies of first authored publications to:

Dr M.A. Gertz
Department of Hematology and Internal Medicine
Mayo Clinic
200 First Street SW
Rochester, MN 55905

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ENDOWED CHAIR IN COMPUTATIONAL BIOPHYSICS
Wake Forest University

Wake Forest University invites applications for an Endowed Chair with the title of Reynolds Professor of Physics and Computer Science. Wake Forest is a highly ranked, private university with about 3,900 undergraduates, 600 graduate students, and 1,700 students in the professional schools of medicine, law, and business. The Physics Department has a major concentration in biophysics with about 1/3 of the Department working in that field. A significant number of the faculty in computer science focus their research on scientific computing with applications in astrophysics, biophysics, and biomedical imaging. The successful candidate will have an international reputation for excellence in computational biophysics. The candidate should also have demonstrated excellence in the teaching of courses relating to topics in physics, biophysics, and computer science at the undergraduate and graduate levels. Continued excellence in research, teaching, and obtaining external funding will be expected. Collaboration with researchers in other departments such as Chemistry, Biology, Mathematics, and the WFU Medical School will be encouraged. Applicants should send a copy of their curriculum vitae and statements regarding their research interests and teaching philosophy to: **Reynolds Professor Search Committee, Box 7507, Wake Forest University, Winston-Salem, NC 27109-7507**. Review of applications will begin December 1, 2002, and will continue until the position is filled. More information is available at **website: http://www.wfu.edu/csphy/recruiting/**. *Wake Forest University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR BIOLOGICAL SCIENCES
Pace University Dyson College of Arts and Sciences

The Department of Biological Sciences, Dyson College of Arts and Sciences, Pace University, invites applications for a full-time, tenure-track position at the Assistant Professor level to begin September 2003. The successful applicant should have a Doctoral degree with emphasis in molecular genetics or a related area and some postdoctoral experience. Responsibilities include teaching undergraduate courses in biology and development of upper-division courses in the Biology Department and graduate courses in the environmental sciences program. The successful candidate is expected to develop an active research program that engages undergraduates. The position will be located at campuses in both New York City and Westchester County, a northern suburb. For full consideration, applicants should send a letter of interest including a statement of their teaching philosophy and research interests, curriculum vitae, and contact information for three references to: **Chair, Search Committee, Department of Biological Sciences, Pace University, 1 Pace Plaza, New York, NY 10038**. Review of applicants will begin November 15, 2002, and continue until the position is filled. *Pace University is an Equal Employment/Affirmative Action Employer, Minorities/Females/Disabled/Veterans, committed to ensuring a diverse learning and working environment. Women and minorities are encouraged to apply.*

POSTDOCTORAL POSITIONS
Molecular Biology

Postdoctoral positions available to study signal transduction in cell proliferation and apoptosis (*Nature* **392:296**; *Mol. Cell. Biol.* **16:2756**; *J. Biol. Chem.* **276:** 29815). Requires Ph.D. or equivalent degree in biological sciences or related fields. Research projects involve training in molecular biology, biochemistry, and particularly in transgenic/knockout mouse technologies. State-of-the-art facilities, competitive salaries, and excellent benefits. Send curriculum vitae and references to: **Dr. Jianke Zhang, Kimmel Cancer Institute, Department of Microbiology and Immunology, Thomas Jefferson University Medical College, 731 BLSB, 233 South 10th Street, Philadelphia, PA 19107. FAX: 215-923-4153; e-mail: jzhang@mail.jci.tju.edu**. *Equal Opportunity Employer.*

POSITIONS OPEN

POSITIONS ANNOUNCEMENT

TENURE-TRACK BIOCHEMISTRY. The Department of Biochemistry at the University of Vermont seeks to fill a full-time (12-month, any professorial rank), tenure-track faculty position in eukaryotic cell biochemistry. Applicants with strong commitments to undergraduate, graduate, and medical student education in an environment fostering collaborative research interactions are encouraged to apply. Candidates pursuing biochemical approaches to problems in gene expression, macromolecular trafficking, membranes, or other dynamic processes in eukaryotic cells are particularly desirable. The successful candidates will complement the Department's existing research strengths in the biochemical, biophysical, and structural characterization of protein-protein, protein-metal ion, protein-membrane, and protein-nucleic acid interactions. The campus of the University is located in the beautiful and cosmopolitan city of Burlington, Vermont, offering an outstanding quality of life in a dynamic college town environment. Interested individuals should send a résumé, a description of career goals and research interests, and names of three references to: **Scott W. Morrical, Ph.D., Search Committee Chairperson, Biochemistry Department, UVM College of Medicine, 89 Beaumont Avenue, Burlington, VT 05405-0068.** Additional information can be found on the Department **website: http://biochem.uvm.edu**. Applications will be accepted until the position is filled; however, we strongly encourage submissions by January 31, 2003. *The University of Vermont is an Affirmative Action/Equal Opportunity Employer. Women and people of diverse racial, ethnic, and cultural backgrounds are encouraged to apply.*

MICROBIAL/CELLULAR BIOTECHNOLOGIST

Microbial/cellular biotechnology: rank open. The Department of Biological Sciences at Northern Arizona University (**website: http://www3.nau.edu/biology/**) invites applications for a tenure-track position with rank open. We seek an individual with an established (or the potential to establish) extramurally funded research program with applications to biotechnology. The successful candidate will teach in the cellular, molecular, and microbiology area at both undergraduate and graduate levels (M.S., Ph.D.) and mentor student researchers. Qualifications include a Doctoral degree in microbiology, any aspect of cellular biology, or a relevant field; experience commensurate with appointment at an appropriate level; and exemplary records in teaching and research. Please submit curriculum vitae; a 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: **Microbial/Cellular Biotechnology Search Committee, Department of Biological Sciences, South Beaver at Franklin Streets, Northern Arizona University, P.O. Box 5640, Flagstaff, AZ 86011-5640**. Position will remain open until filled or closed. Review of applications will begin November 25, 2002. This position is subject to availability of funding. *Northern Arizona University is an Equal Opportunity/Affirmative Action Employer. Minorities, women, persons with disabilities, and veterans are especially encouraged to apply.*

SENIOR POSTDOCTORAL POSITION available in cardiac myocyte pathology/biology for cardiovascular tissue engineering and gene therapy projects. Requires substantial experience in cardiomyocyte, vascular, extracellular matrix pathology/biology (possibly developmental biology). Expertise in organ culture or gene therapy a positive. Projects span the gamut from *in vitro* to *in vivo*; be part of a cross-disciplinary team in an exciting new field. Potential for faculty track upon independent funding. Send curriculum vitae and three references to: **Margaret D. Allen, M.D., Medical Director, The Hope Heart Institute, 1710 East Jefferson, Seattle, WA 98122.**

POSITIONS OPEN

ASSISTANT PROFESSORS
Two Tenure-Track Faculty Positions
Biology Department
Williams College

The Biology Department at Williams College, a premier liberal arts college with a longstanding tradition of excellence in the sciences, invites applications for two tenure-track positions at the rank of Assistant Professor to begin July 2003. Neuroscientist with research interests in the molecular aspects of neuronal function to teach upper-level courses in neurobiology, introductory courses in cellular and molecular biology, and participate in the neuroscience program. Plant Molecular Biologist to teach upper-level courses in plant growth and development or physiology, introductory courses in cellular and molecular biology, and participate in the biochemistry and molecular biology program.

Normally, faculty members teach one course and two laboratories or the equivalent each semester. Start-up funds and internal funding for research are available, and a research program that attracts extramural funding and involves talented undergraduates is expected. Ph.D., postdoctoral experience, and a strong research record are required. Applicants should submit curriculum vitae; brief statements of teaching and research interests; and arrange for three letters of recommendation to be sent by December 5, 2002, to: **Heather Williams, Chair, Department of Biology, Williams College, Williamstown, MA 01267**.

An Equal Opportunity/Affirmative Action Employer, Williams College especially welcomes applications from women and minority candidates.

VERTEBRATE BIOLOGIST
The University of Scranton

The University of Scranton invites applications for a tenure-track position in vertebrate biology starting in August 2003. Applicants must have a Ph.D. and postdoctoral experience is desirable. The successful candidate will teach upper-division courses including comparative vertebrate biology as well as anatomy and physiology for allied health students. Excellence in teaching and an active research program that involves undergraduates are expected. Submit curriculum vitae, statement of teaching philosophy, and three letters of reference to: **Dan Townsend, Search Committee Chair, Biology Department, University of Scranton, Scranton, PA 18510**. Applications will be accepted until 15 January 2003.

Located in northeastern Pennsylvania near the Pocono Mountains, The University of Scranton is a broadly regional institution of 4,800 undergraduate and graduate students. Recognized nationally for the quality of its education, the University is committed to providing liberal arts education and strong professional and preprofessional programs.

The University of Scranton is, by tradition and choice, a Catholic and Jesuit university. The successful candidate will have an understanding of and commitment to the goals of Jesuit education. A full statement of our mission may be found at **website: http://www.uofs.edu/admin/mission.html**. *The University of Scranton is an Affirmative Action/Equal Opportunity Employer/Educator. Minority persons, women, veterans, and disabled persons are encouraged to apply.*

POSTDOCTORAL POSITION in proteomics. Unique opportunity to join a multidisciplinary research team that applies 2-D gel electrophoresis; mass spectrometric methods (MALDI-TOF MS, ESI-QIT MS, ESI-QTOF MS); and bioinformatics to the study of prostate diseases. Ideal qualifications include a Ph.D. (chemistry or biochemistry) and solid research experience in biological mass spectrometry and/or protein chemistry. Please send your résumé and three letters of recommendation to: **Sarka Beranova-Giorgianni, Ph.D., Department of Pharmaceutical Sciences and the C. B. Stout Neuroscience Mass Spectrometry Laboratory, University of Tennessee Health Science Center, 847 Monroe Avenue, Room 117, Memphis, TN 38163. E-mail: sberanova@utmem.edu**. *UTHSC is an Equal Opportunity Employer.*

Tenure Track or Senior Investigator in Virology
National Institute of Allergy and Infectious Diseases
National Institutes of Health
Department of Health and Human Services

The National Institute of Allergy and Infectious Diseases (NIAID), a major research component of the NIH and the Department of Health and Human Services, is recruiting for a tenure track or tenured investigator to pursue an independent research program that complements current areas of focus within the Laboratory of Viral Diseases (LVD) (LVD website: **http://www.niaid.nih.gov/dir/labs/lvd.htm**). The LVD is located on the NIH main campus in Bethesda, which provides rich opportunities for scientific collaborations. The investigator will have access to LVD facilities for DNA sequencing, confocal/light microscopy, electron microscopy, and flow cytometry, as well as Institute facilities for microarrays, proteomics, mass spectrometry, confocal/light microscopy, fluorescence activated cell sorting/advanced flow cytometry, and synthetic peptide production.

The successful individual will possess an M.D. or Ph.D. degree and be a U.S. citizen or permanent resident. The individual should have extensive experience in experimental research, demonstrating productivity, creativity and outstanding future potential. Preference will be given to those who apply state-of-the-art molecular, genetic, immunological, or structural approaches to address fundamental problems in virus replication, structure, or pathogenesis, possibly with implications for prevention and treatment of viral diseases.

A competitive package will be offered from NIAID Intramural funds, providing startup and ongoing operating budget for equipment, supplies, support personnel, and fellows in addition to laboratory space and salary. Salary is commensurate with research experience and accomplishments, and a full Civil Service package of benefits (including retirement, health, life and long term care insurance, Thrift Savings Plan participation, etc.) is available.

With nation-wide responsibility for improving the health and well being of all Americans, the Department of Health and Human Services oversees the biomedical research programs of the National Institutes of Health (NIH) and those of NIH's research Institutes.

Applicants should send curriculum vitae, statement of research interest, and names of three references to:

Philip M. Murphy, M. D.
Chair, Search Committee
Bldg 10, Room 11N113
National Institutes of Health
Bethesda, MD 20892
Email: pmurphy@niaid.nih.gov

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SCIENTIST - RT-PCR

Join our Gene Discovery division. Ph.D in Biological sciences, experience in RT-PCR and PCR amplification Preferred: Real-time PCR detection and instrumentation, data analysis, and statistics including multiplexing, standard curve. Knowledge of common detection methods for qPCR is required. Job # 02-C1433.

RESEARCH ASSOCIATE III - Nucleic Acids Purification/Separation

Opportunities in our Separations and Analysis division. BS in Chemistry, Biochemistry, Molecular Biology, or related field with 5 plus years of research experience or MS in Chemistry, Biochemistry, Molecular Biology, or related field with 2 plus years of research experience. Research experience in an industrial setting related to nucleic acid purification and separation as well as experience with automated systems is preferred. Job # 02-C1925.

RESEARCH ASSOCIATE II - Virology

In our Cloning and Gene Expression division, you'll perform laboratory techniques such as DNA cloning, PCR and virus handling to complete experiments designed to address a variety of specific problems. Requires a BS in Biology or related field with 2-5 years' molecular biology research experience or MS in Biology or related field with 0-2 years' molecular biology research experience. Experience with mammalian cell culture, transfection, DNA cloning is a must. Job # 02-C1870.

We are looking for motivated individuals who are eager to join an exciting, growing company. Please e-mail your resume to: Attn:(Insert Job #), **resumes@Invitrogen.com or mail/fax to: Invitrogen Corporation, HR, 1600 Faraday Ave., Carlsbad, CA 92008. Fax: 760-602-6600.**(Job # must be referenced for consideration.) EOE/M/F/D/V.

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STATE UNIVERSITY of West Georgia

TWO BIOLOGY FACULTY POSITIONS

The Department of Biology of the State University of West Georgia invites applications for two tenure-track positions that begin August 1, 2003. For the first position (**ASSISTANT/ASSOCIATE**), candidates should have a Ph.D. in developmental biology or a closely related field. The candidate will teach embryology, freshman or nonmajors biology, and other upper-division courses. For the second position (**ASSISTANT**), candidates should have a Ph.D. in botany/plant physiology or a closely related field. The candidate will teach plant taxonomy/physiology, freshman or nonmajors biology, and other upper-division courses. Currently, the Department has 13 faculty members. The university is a residential, liberal arts institution with approximately 9,600 students. The beautiful 400-acre campus is located 45 miles west of Atlanta in Carrollton, Georgia. Learn more about the Department and university at **website: http://www/westga.edu/**. Applicants should submit a letter of application, curriculum vitae, three letters of reference, and transcripts to: **David L. Osborne, Ph.D.; e-mail: dosborne@westga.edu** (for the developmental position) or **Gregory T. Payne, Ph.D.; e-mail: gpayne@westga.edu** (for the botany position), **Department of Biology, State University of West Georgia, Carrollton, GA 30118**. Reviews begin November 2002. *The State University of West Georgia is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSORS AND ASSOCIATE PROFESSORS FACULTY POSITIONS
Sherbrooke, Québec, Canada
Université de Sherbrooke, Faculté de Médecine

This offer is for tenure-track faculty positions in the area of nucleic acid biology and related fields. Candidates must have a record of accomplishments that demonstrates their potential or success as independent Researchers. Current faculty members maintain well-funded research programs in the biochemistry, molecular biology, or genetics of DNA replication and repair; RNA processing; apoptosis; and cancer (**website: http://www.med.usherb.ca/microbiologie/**). The Department offers excellent facilities; an interactive and dynamic research environment (RNA group, oncology group, functional genomics group); and a regular seminar program. Applicants should send their curriculum vitae, the names and e-mail addresses of three individuals willing to provide letters of reference, and a brief outline of their proposed research program to: **Dr Benoit Chabot, Head, Département de microbiologie et d'infectiologie, Faculté de Médecine, 3001, 12e avenue Nord, Université de Sherbrooke, Sherbrooke, Québec, J1H 5N4 Canada. E-mail: benoit.chabot@usherbrooke.ca**.

The Université de Sherbrooke is a French-speaking institution located 140 km east of Montréal and 200 km south of Québec City. Sherbrooke provides a quality environment for young families with a renowned school system, a beautiful countryside, and outdoors activities. The deadline for applications is January 15, 2002, or until positions are filled. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.*

POSTDOCTORAL POSITION in immunology. Postdoctoral position available to study anti-DNA antibodies, SLE, and lupus nephritis. The candidate should have a strong background in immunology and significant experience with cellular and molecular techniques. Interested applicants should send complete curriculum vitae, a statement of research interests, copies of recent publications, and the names of three references to: **Dr. Chaim Putterman, Division of Rheumatology, Albert Einstein College of Medicine, 1223 Ullmann, 1300 Morris Park Avenue, Bronx, NY 10461. E-mail: putterma@aecom.yu.edu.** *Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT/ASSOCIATE FACULTY POSITION
University of Florida
College of Pharmacy
Department of Pharmacodynamics

The Department of Pharmacodynamics at the University of Florida College of Pharmacy is accepting applications from qualified candidates for a 12-month tenure-track position as Assistant or Associate Professor.

Applications are encouraged from individuals with research interests focused in neuropharmacology or signal transduction and with potential for collaborations with Researchers within the pharmacogenomics, gene therapy, cancer, aging, drug abuse, or toxicology centers within the McKnight Brain Institute or Health Sciences Center. Candidates should have a Ph.D. and at least two years of postdoctoral experience. Candidates should demonstrate evidence of an independent, extramurally funded research program. Candidates should also have interests in graduate education and teaching of pharmacology. Salary and rank will be commensurate with qualifications and experience.

Applicants should send curriculum vitae; statements of research plans and teaching interests; and names of three references by November 22, 2002, to: **Chair, Search Committee, Department of Pharmacodynamics, Box 100487, University of Florida, Gainesville, FL 32610**.

The University of Florida is an Equal Opportunity/Affirmative Action/Americans With Disabilities Act Employer. If applicants need special accommodations for this position, please contact: Committee Chair, Ralph Dawson, Jr., Ph.D., Associate Professor of Pharmacodynamics; e-mail: dawson@cop.ufl.edu; Telephone: 352-392-3408.

NEUROSCIENTISTS

The Department of Anatomy and Neurobiology at the University of Tennessee Health Science Center is seeking qualified applicants to fill three tenure-track positions at the **ASSISTANT, ASSOCIATE**, or **FULL PROFESSOR** level. Candidates must have a Ph.D. M.D., or equivalent, relevant postdoctoral experience; and an active research program in neuroscience with a high potential for external funding. Preference will be given to candidates whose research most closely fits with the existing strengths of the Department in systems neuroscience, developmental neurobiology, and neurogenetics. Faculty members participate in the teaching of professional students and in graduate courses in their area of expertise. Rank and salary will be commensurate with qualifications. The Department is the center of a well-established, multidisciplinary neuroscience program with a highly interactive, productive group of Neuroscientists. Please submit curriculum vitae, a brief statement of research and teaching experience, and names of three references to: **Chair, Faculty Search Committee, Department of Anatomy and Neurobiology, University of Tennessee Health Science Center, 855 Monroe Avenue, Suite 515, Memphis, TN 38163.** Review of application will begin in November 2002 and continue until the positions are filled. *The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX Section 504/Americans With Disabilities Act/Age Discrimination in Employment Act Employer.*

POSTDOCTORAL POSITIONS for the following studies are available: (1) molecular mechanisms regulating neutrophil apoptosis, phagocytosis, and the oxidative burst; (2) determinants of immune complex-mediated neutrophil recruitment; and (3) the role of GTPases in endothelial cell function using *in vitro/in vivo* approaches. Strong background in molecular biology/cell biology or small animal experimentation (especially intravital microscopy) is desired. Publication(s) in international journals is a prerequisite. Please send curriculum vitae and names of three references to: **Tanya Mayadas, Ph.D., Associate Professor of Pathology, Brigham and Women's Hospital and Harvard Medical School, 221 Longwood Avenue, Room 404, Boston, MA 02115. FAX: 617-732-5933.**

POSITIONS OPEN

VERTEX

ASSOCIATE SCIENTIST (pharmacology): Use skills in cell culturing and high-throughput screening (HTS) to set up an HTS for permeability screens using the cell line. Use skills in molecular biology and ligand binding to characterize the effect of novel drug candidates to express specific mRNAs, proteins, and related gene products; work with math tools such as EXCEL, PRISM, Sigma Plot. M.Sc. in pharmacology, chemistry, or related field plus one year of experience (or B.Sc. plus five years). Job Code: 1120.

INVESTIGATOR (cell biology): Work on projects that emphasize viral generation (e.g., adenovirus and retrovirus); plaque purification; and titration. Use advanced skills to design/implement viral inhibition assays. Use skills in molecular biology techniques such as *in vitro* mutagenesis. Conduct animal experiments using viral and/or cancer models. Ph.D. in molecular and micro- or cell biology; no experience (or M.Sc. plus three years). Job Code: 4100.

INVESTIGATOR (process chemistry): Use skills in scalable chemical synthesis and problem-solving analysis to develop viable, simplified, and cost-effective manufacturing processes. Use laboratory skills in HPLC for purity assessment and other equipment such as pressurized reactor vessels and reactor IR for real time reaction analysis and automated process development work stations for route screening and optimization. Support medicinal chemistry SAR programs. M.Sc. in chemistry or relevant biomedical discipline plus two years of experience. Job Code: 2010.

STAFF INVESTIGATOR (pharmaceutics): Use skills in pharmaceutics and physical chemistry to conduct preformulation studies for new chemical entities. Develop formulations for preclinical *in vivo* studies and human clinical studies. Use skills in oral and paretenral drug formation development and knowledge of GMPs. Ph.D. in pharmaceutics or related; no experience (or M.Sc. plus three years). Job Code: 2000.

PROGRAM EXECUTIVE: Implement track record of mastering scientific projects for drug development processes blended with skills in market analysis and building large-scale strategic partnership management. Act as the principal internal/external advocate for molecular drug development programs. Manage the scientific teams and marshal the necessary resources to achieve effective/efficient drug development. Ensure the overall coherency and appropriateness of programs encompassing commercial and strategic perspectives. M.D. or Ph.D. in physiology or related area plus four years of program management experience. Job Code: 3120.

PRINCIPAL BIOSTATISTICIAN: Lead the development of mathematical statistical methodology for experimental design, protocol development, statistical analysis plans, clinical studies, INDs, NDAs. Use skills for design of statistical approaches and related research for clinical trials/studies in pharmacokinetics employing mathematical techniques (e.g., crossover design/analysis, nonparametric statistics, categorical models, sequential design, survival analysis, etc.). Use skills in SAS/STAT and relevant trial design simulation tools. B.Sc. in math, statistics, or related plus eight years of experience that includes international pharmaceuticals industry, team leadership, and CRO work experience. Job Code: 1010. Please send résumé to **e-mail: resumes@bo.hodes.com; FAX: 617-576-2361**. *We are an Equal Opportunity Employer who makes diversity the foundation of all success.*

UCLA Rheumatology is seeking **POSTDOCTORAL TRAINEE** in immunology, molecular biology, or other appropriate science for two to three years to study mechanisms of immune tolerance in murine lupus in NIH-funded laboratory headed by **Bevra Hahn, M.D.** Must have Ph.D. by time of arrival; M.D. with bench research experience; valid J-1, H-1 visa; *or be a permanent resident or citizen.* Send application by **e-mail: bhahn@mednet.ucla.edu**.

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Interested in an Academic Career?
Jump Start with the NHLBI K22 Career Transition Award

The National Heart, Lung, and Blood Institute (NHLBI) Career Transition Award (K22) provides funds for 1) full-time Postdoctoral training in the NHLBI Division of Intramural Research in Bethesda, Maryland followed by 2) bridge funding for up to two years at $150,000/year as an independent investigator after leaving NIH. This is an exceptional opportunity designed for academically-bound junior scientists.

Training at NHLBI can be obtained in any of the laboratories/branches under the guidance of one or more investigators. Projects that take advantage of the cutting-edge research facilities in transgenic animals, proteomics, and biological imaging at NHLBI are especially encouraged. A complete list of investigators and their research areas is available at: http://www.nhlbi.nih.gov/labs/education/investigators.html.

Candidates must be U.S. citizens, resident aliens, or nonresident aliens with a valid work employment visa. HHS and NIH are Equal Opportunity Employers. Minorities, women, and persons with disabilities are encouraged to apply. Deadlines for applications are **June 1**, **October 1** and **February 1** of each year. The application for a K22 is normally developed by the candidate and the proposed mentor working together and is submitted on the PHS-398 form. Applications are reviewed for funding by an appropriate review panel within NHLBI. The NHLBI is one of the Institutes of the National Institutes of Health, US Department of Health and Human Services. Additional information on Postdoctoral training at NHLBI and the K22 award is available at http://www.nhlbi.nih.gov/labs/education/postdoc.html or by contacting the **Office of Education, Division of Intramural Research, NHLBI, Building 10, Room 8C-102, MSC 1754, Bethesda, MD 20892-1754, Telephone: 301-451-9440, Fax: 301-594-8133 or e-mail: direducation@nhlbi.nih.gov.**

HHS and NIH are Equal Opportunity Employers

NATIONAL LIBRARY OF MEDICINE

Medical Informatics Training Program at the Lister Hill National Center for Biomedical Communications

The Lister Hill National Center for Biomedical Communications (LHNCBC) is a division of the National Library of Medicine which is one of the National Institutes of Health, Department of Health and Human Services, the government's primary agency for support and conduct of biomedical research. LHNCBC provides opportunities for postdoctoral fellows, graduate and medical students, college students, and visiting faculty to participate in collaborative research in a variety of areas of medical informatics, including:

- Consumer health informatics
- Digital library research
- World Wide Web applications
- Wireless computing
- Database design
- Biomedical knowledge discovery
- Medical language processing
- Automated indexing
- Image processing research
- Medical education systems

Postdoctoral candidates should have a Ph.D., M.D. or equivalent degree with a background in research and training in medical informatics, computer science or engineering. Stipends for postdoctoral fellows begin at $46,469. More details can be seen at our Web site at: **http://lhncbc.nlm.nih.gov**. Send applications and inquiries to: **May Cheh; National Library of Medicine, 8600 Rockville Pike, Mail Stop 54, Bethesda, MD 20894-6075; Email: cheh@nlm.nih.gov**.

This is an equal opportunity program open to all qualified persons without regard to race, sex, sexual orientation, religion, age, color, disability or national origin.

GRANTS

Creating the future of biotech—Together

Invitrogen's Research Tools Development Grants Program provides funding for investigators developing innovative tools for use in life science research, including investigators working in academics, not-for-profit institutions, and for-profit companies. Total funding is US$5 million per year, with annual individual awards of up to US$100,000. Grants are provided quarterly; each quarter focuses on a specific field of interest.

Fourth quarter 2002 funding is for the area of **amplification, labeling and quantitation** of nucleic acids—including proposals for the *in vitro* or *in vivo* applications of detection, expression, hybridization, microarrays, and screening. Deadline for full Grant Proposals is December 1. A preproposal is required prior to submitting a Grant Proposal. **For more information, visit www.invitrogen.com, e-mail grants@invitrogen.com, or call 800 955 6288, ext. 66140.**

1600 Faraday Ave., Carlsbad, CA 92008 USA
P: 760 476 6140 F: 760 602 6563
www.invitrogen.com

Invitrogen life technologies

USDA ars

The Agricultural Research Service, Plant Sciences Institute, Produce Quality and Safety Laboratory, in Beltsville, Maryland, is seeking a **MICROBIOLOGIST** GS–12/13 with promotion potential. Salary is commensurate with experience (salary range: GS–12, $55,694 to $72,400 and GS–13, $66,229 to $86,095 per annum) plus benefits. *U.S. citizenship is required.* Incumbent will plan and conduct research on attachment, survival, and growth of human bacterial pathogens on fresh and fresh-cut produce. The position requires education in microbiology plus (1) skill in techniques, principles, and practices of microbiology; (2) knowledge of functional genomics and/or proteomics; (3) skill in conducting research on microorganisms in food; and (4) ability to publish research results in peer-reviewed journals. For research information, contact: **Dr. Ken Gross; Telephone: 301-504-6128.** Candidates must request a copy of Vacancy Announcement ARS–X2E–2530 by either calling **Telephone: 301-504-1482** or via **website: http://www.afm.ars.usda.gov/divisions/hrd/index** in order to address specific information outlined in the Vacancy Announcement. Applications must be postmarked by November 12, 2002. *USDA/ARS is an Equal Opportunity Provider and Employer.*

The Northwest Fisheries Science Center (**website: http://www.nwfsc.noaa.gov**) of the National Marine Fisheries Service (NMFS), NOAA, seeks a **QUANTITATIVE ECOLOGIST**. Appointment will be made at the GS–12 (salarly range: $55,839 to $72,588) or GS–13 (salary range: $66,401 to $86,319) level commensurate with experience. *U.S. citizenship is required.* We seek an individual working in any area of aquatic ecology to complement the existing strengths in fishery biology of the Northwest Fisheries Science Center. We especially seek candidates interested in working on a multidisciplinary team of Scientists who study fish passage, migration, and survival of Snake and Columbia River salmonids. The incumbent will engage in cooperative research to incorporate environmental and ecological effects into life cycle models of Pacific salmon and synthesize data from different sources for input to population models. The individual will use modern quantitative tools to analyze, synthesize, and interpret data and develop predictions about population or ecosystem response to fishery management; organize and write manuscripts for journals; write research reports; provide scientific input to resource managers; and establish and maintain contacts with researchers in and outside of the NMFS. A Ph.D. or equivalent degree, postdoctoral research experience, demonstrated expertise, and research productivity are desired. Applicants must address and meet specific placement factors and specialized experience as defined in the official vacancy announcements W.NMF.NWC.020593.A(or B).JC. To apply for this position, go to the Department of Commerce Opportunities Online (COOL) **website: http://www.jobs.doc.gov**. Closing date is November 16, 2002. For more information, contact: **John Williams; e-mail: john.g.williams@noaa.gov.**

POSTDOCTORAL POSITION available immediately in epithelial biology. We are exploring the molecular physiology of intestinal salt absorption and gastric acid/base secretions using mutant animal and tissue culture models. We utilize advanced imaging methods like confocal and multiphoton fluorescence microscopy to study subcellular domains in living cells and tissues. Details of laboratory interests at **website: http://www.iupui.edu/~medphys/montrose**. Candidates with experience in imaging, native epithelial tissue studies, and molecular biology are urged to apply. Applicants should send curriculum vitae and the names of three references to: **Marshall Montrose, Department of Physiology, Indiana University; e-mail: mmontros@iupui.edu; FAX: 317-278-3840.**

POSITIONS OPEN

JOIN OUR DYNAMIC TEAM
Lindsley F. Kimball Research Institute
The New York Blood Center, New York

Currently we offer three excellent opportunities in our Research Laboratories:

POSTDOCTORAL RESEARCH FELLOWS: The candidates should have a Ph.D. degree in molecular or cell biology or in other related fields with zero to three years of research experience. The candidates should have experience in standard recombinant DNA technology and relevant techniques.

Project 1: The candidate will participate in an ongoing research project of cloning and characterization of a novel human red cell receptor involved in malaria parasite invasion. Experience in receptor-ligand interaction studies and expertise in all relevant techniques required for immunoaffinity purification of proteins, 2-D gel electrophoresis, and cDNA cloning. Experience in cell culture techniques is highly desirable. Hands-on experience with malaria parasites is definitely a plus.

Project 2: The candidate will participate in a project involving the expression of clinically significant blood group antigens and epitope mapping. Experience in protein expression in cell culture, bacterial, and baculovirus system required. Experience in FACS analysis, ELISA techniques, and phage display library is highly desirable.

RESEARCH TECHNICIAN: The candidate should have a B.S./M.S. degree in molecular or cell biology. The candidate will participate in a research project involving blood group antigens/chemokine receptor. Experience with molecular biology techniques including PCR/RT-PCR, DNA/RNA blot hybridization, cDNA cloning by library screening, DNA subcloning and plasmid DNA preparation, gel electrophoresis, and protein immunoblot assay is required. Experience in cell culture, immunohistological techniques, and handling experience with mice is highly desirable.

We offer a competitive salary and benefits package. For immediate consideration, please submit résumé indicating desired position above with salary requirements to: **Human Resources Department-TC, New York Blood Center, 150 Amsterdam Avenue, New York, NY 10023. FAX: 212-721-2752; e-mail: careers@nybloodcenter.org; website: http://www.nybloodcenter.org.** *New York Blood Center: where concern for the community comes first. Equal Opportunity Employer; Minorities/Females/Disabled/Veterans.*

FACULTY POSITION IN EVOLUTIONARY BIOLOGY
Brown University

The Department of Ecology and Evolutionary Biology (EEB) is a group of strongly interactive faculty with particular strengths in evolutionary morphology, paleobiology, ecology, and evolutionary genetics. We announce a three-year, renewable, tenure-track **ASSISTANT PROFESSORSHIP** for an Evolutionary Morphologist available 1 July 2003. Applicants must have a Doctorate, demonstrated excellence in research, potential for excellence in teaching, ability to develop an independently funded research program and potential to complement and interact productively with departmental faculty. Fields of particular interest include vertebrate evolutionary morphology, biomechanics, ecological/evolutionary physiology, and historical/phylogenetic analysis. Responsibilities include teaching in a human morphology course for medical students, contributions to courses in evolutionary biology, and graduate training. Applicants should submit résumé, statement of research plans and teaching interests, representative reprints, and have three letters of reference sent to: **Dr. C. Janis, Box G-B207, Department of Ecology and Evolutionary Biology, Brown University, Providence, RI 02912.** For fullest consideration, applications must be received by 2 December 2002. Applications will be accepted until the position is filled or the search is closed. *Brown University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

UNIVERSITY OF MINNESOTA
Cancer Center

NCI CCC
A Comprehensive Cancer Center Designated by the National Cancer Institute

POSTDOCTORAL ASSOCIATE

Position available immediately to investigate the immune response to leukemia after bone marrow transplantation. The project will focus on the identification and characterization of T cell-defined minor histocompatibility antigen or leukemia-associated antigen. Applicants must have a Ph.D. and/or M.D. and strong background in cellular immunology, molecular biology, and human T cell culture. Additional experience with retroviral vectors is a plus.

Qualified applicants should submit curriculum vitae, research summary, and contact information for three references to: **Dr. Xianzheng Zhou, c/o Human Resources, University of Minnesota Cancer Center, Mayo Mail Code 806, 420 Delaware Street, S.E., Minneapolis, MN 55455. E-mail: cchr@ahc.umn.edu.**

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

CHAIR AND PROFESSOR/ASSOCIATE PROFESSOR
Department of Biological Sciences
SUNY–Brockport

Essential functions of this tenured position include administrative leadership in curriculum, governance, and faculty development. Teach a lecture course in anatomy and physiology and coordinate the laboratory sections, establish an active research program, seek extramural funding, and develop an upper-level/graduate course in area of expertise. Required: Ph.D. in cell/molecular/developmental biology or related field, a record of scholarly achievement, evidence of excellence in teaching, and leadership in administration.

The Department occupies a newly renovated building with state-of-the-art facilities, offers Bachelor's and Master's degrees in biological sciences, and a Bachelor's degree in medical technology. The Department has recently undergone reorganization and is seeking to enhance its programs in cell, molecular, and developmental biology. A plan to initiate a program in biotechnology is also underway.

Submit letter of application; curriculum vitae; transcript showing highest earned degree; three letters of reference; and brief statements of leadership philosophy, teaching philosophy, research plans, and equipment requirements. Salary is competitive. Starting date is August 2003. Beginning review date for applications is November 15, 2002. Applications will be accepted until December 15, 2002, or until the position is filled. Send application materials to: **Mr. Terry Hooper, Faculty/Staff Recruitment Office, SUNY College at Brockport, 409 Allen Administration Building, 350 New Campus Drive, Brockport, NY 14420-2929.** *Affirmative Action/Equal Opportunity Employer.*

BIOCHEMISTRY/MOLECULAR BIOLOGY

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

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

SYMPOSIA

MOLECULAR MECHANISMS OF ALZHEIMER'S DISEASE AND NEURODEGENERATION SYMPOSIUM

Friday, March 7, 2003
Westin Horton Plaza
San Diego, California

A one-day symposium for basic science researchers, physician scientists and clinicians covering the latest developments in Alzheimer's disease research and other neurodegenerative conditions.

Access our website at **www.ahaf.org** for complete program and registration information or contact Lisa Morgan at 301-948-3244.

Sponsored by Alzheimer's Disease Research & University of California San Diego, School of Medicine

Genta

Genta, the fastest-growing bio-pharmaceutical company in New Jersey, is committed to developing innovative new medicines for cancer therapy. With historic strengths and intellectual property in oligonucleotide-based technologies, Genta is committed to expanding its product portfolio through in-licensing acquisitions and internal drug discovery. To spearhead this initiative, we seek a highly qualified candidate to lead our research team.

Vice President, Research

As the senior member of the management team in charge of research, you will initiate, lead and manage all internal and external research programs with full accountability for developing and directing the company's research efforts in drug discovery, including acquisition of "druggable" targets, medicinal chemistry, target validation, and evaluation of candidate compounds in appropriate models. You will also partner with Pre-Clinical to transfer lead candidates to scale-up production and formulation; assist Legal Counsel in developing intellectual property; and oversee the company's scientific evaluation of in-licensing product opportunities and corporate acquisitions.

Ideal candidates will have a Ph.D. in a life science (specialization in cellular or molecular biology or pharmacology preferred); and 10-15 years of industry experience (we will consider relevant academic achievements with a track record in cancer research). You must also have significant experience in building and directing multidisciplinary laboratory teams in the life sciences; a track record of integrity, credibility and productivity; and strong communication and presentation skills. Your experience and record of publications should reflect a level of stature that will facilitate recruitment of other high-caliber scientific staff.

Genta offers an attractive and competitive compensation and benefits package, including stock options. Interested candidates should submit a resume to: **jobs@genta.com** indicating their name and job title of this position in the subject line. We appreciate your interest in our company. However, we will only be able to respond to those individuals who are selected for further consideration. Genta is an EOE.

www.genta.com

COURSE

Smart engineers and scientists often become patent agents.

To find out why and how, see

ProfessorKayton.com

Professor Kayton's New Patent Related Career Opportunities

VACANCY ANNOUNCEMENT
U.S. DEPARTMENT OF ENERGY
SENIOR INFORMATION MANAGEMENT EXECUTIVE
OFFICE OF SCIENCE
Washington, DC
$125,972 to $138,200 per annum

The U.S. Department of Energy (DOE) is seeking applicants for the Senior Executive Service position of Senior Information Management Executive for the Office of Information Technology Management in the Office of Science. The Executive serves as the principal information technology (IT) and information management (IM) officer for the Office of Science (SC) on the planning, acquisition, and evaluation of IT investments, as well as the development and implementation of effective and efficient IT services to meet all mission specific SC operations and service delivery at SC Headquarters and field offices, and development of appropriate interfaces to related systems at associated laboratories. The position is responsible for ensuring that IT infrastructure and services are planned for, acquired, and delivered to contribute to the success of complex research programs. The Executive provides advice and assistance to the Director and other senior managers to ensure that information technology is acquired and information resources are managed in a manner that enables the availability of effective IT/IM resources for meeting programmatic scientific missions. As the principal change agent for SC IT/IM enterprise activities, the Executive formulates, articulates and coordinates a shared vision and corporate perspective for the Office of Science and champions corporate-wide initiatives that benefit the SC community. The Executive is the key player in orchestrating the Office of Science implementation of the President's Management Agenda E-Government activities (e.g., DOE E-Government Strategic Plan) and in enabling reengineering of SC business processes through E-business and E-Government initiatives. This position oversees SC implementation of cyber security policy. The Senior Information Management Executive reports to the Deputy Director for Operations in the SC Director's Office.

Exceptional difficulty in recruiting highly qualified candidates may be the basis for paying a recruitment or relocation bonus (up to 25% of base pay), requesting approval of a dual compensation waiver for civil and uniformed service retirees, or utilization of critical pay authority (annual salary may be set up to $166,700 per annum, the rate payable for Level II of the executive pay schedule).

Applicants may apply by mail at the address noted below, or on-line by accessing **http://chris.inel.gov/jobs/index.cfm/index.cfm?fuseaction**. To meet qualification requirements, applicants are encouraged to view those requirements on the above-mentioned website. Applications may be mailed to **Department of Energy, Headquarters Human Resources Operations Division, ME-532, Room 4E-084, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0735, ATTN: ETR-02-ES-041**. However, due to mail delays currently being experienced in the Washington, DC metro area, DOE strongly suggests you express mail your application, or submit it on-line. **APPLICATION MATERIALS MUST BE POSTMARKED OR SUBMITTED ON-LINE NO LATER THAN NOVEMBER 14, 2002**. Direct inquiries to: **Rhonda Kennedy, Headquarters Human Resources Operations, ME-532, 4E-090 FORS, DOE, Washington, DC 20585 at (202) 586-3544**. *DOE is an equal opportunity employer. U.S. citizenship is required.*

POSITIONS OPEN

POSTDOCTORAL POSITION AVAILABLE
Hair and Stable Isotopes
University of Utah

We have an immediate opening for a two-year Postdoctoral position investigating the stable isotopic composition of amino acids in hair. The objective of the research is to better understand the relationships between amino acid components of hair and dietary input versus protein turnover parameters. We seek applicants with a strong background in biochemistry. Our preference is for applicants with a strong background in compound-specific isotope mass spectrometry. The research will be conducted in the laboratories of **Jim Ehleringer** and **Thure Cerling** at the University of Utah, Salt Lake City. The salary is competitive and the position offers full medical benefits for the candidate and family members.

Applicants should electronically submit a letter of interest, curriculum vitae, and names of three individuals who will write letters of support. Applications should be sent to **e-mail: ehleringer@biology.utah.edu**.

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

WETLAND ECOLOGIST. The Institute of Pacific Islands Forestry, Pacific Southwest Research Station, U.S. Department of Agriculture Forest Service, seeks an Ecologist with experience in coastal forested wetland landscapes and biogeochemistry. The position will be based in Honolulu, Hawaii, but most research will be conducted on mangrove forests and freshwater swamps in Micronesia. This position is GS–12 with a salary range of $49,959 to $64,944 plus 25% cost-of-living allowance. *Applicants must be U.S. citizens.* A vacancy announcement that includes qualification requirements and application procedures is available on the U.S.A. Jobs **website: http://www.usajobs.opm.gov** and from: **Personnel Management, PSW Research Station, P.O. Box 245, Berkeley, CA 94701. Telephone: 510-559-6350; FAX: 510-559-6352; e-mail: psw job applications@fs.fed.us**. Questions regarding this position should be directed to: **Dr. Katherine Ewel, Institute of Pacific Islands Forestry; Telephone: 808-522-8230, Extension 109; e-mail: kewel@fs.fed.us**. Deadline for applications is December 6, 2002. *USDA is an Equal Opportunity Employer.*

POSTDOCTORAL POSITIONS IN IMMUNOLOGY
Yale University School of Medicine

Postdoctoral positions available immediately to examine B and T cell immune responses against tumors and in models of autoimmune disease. In particular, the laboratory is studying mechanisms of how specific tumor antigens can initiate antitumor cytotoxic T cells and protect animal models from tumor challenge. A second area of study is in determining the forms of autoantigens capable of breaking immunologic tolerance and in understanding the role of autoreactive T cells in autoimmune disease. Candidates should have prior experience in studying murine models of disease *in vitro* and *in vivo* T cell immunology, tissue culture, and/or mechanisms of antigen processing. Please send both a cover letter of your research interests and curriculum vitae in applying for these positions to: **Mark Mamula, Ph.D., Yale University School of Medicine, 333 Cedar Street, P.O. Box 208031, New Haven, CT 06520-8031. E-mail: mark.mamula@yale.edu**.

POSTDOCTORAL POSITION

A Senior Research Associate position is immediately available in my laboratory at the Northwestern University Medical School, Chicago, Illinois. The candidate must have a minimum of three years of post-doctoral research experience and demonstrated expertise in cell and molecular biology techniques. The major focus of research in my laboratory includes the study of mechanisms involved in the pathogenesis of diabetic nephropathy during embryonic development. Salary is negotiable depending upon the research experience. Please contact: **Dr. Kanwar; e-mail: y-kanwar@nothwestern.edu** for further information.

POSITIONS OPEN

POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS

Two positions available immediately for recent Ph.D.'s to work on a collaborative project studying translational regulation in negative strand RNA viruses. Successful applicants will investigate mRNA structure and protein/RNA interactions important for translation start site selection in the polycistronic P/C mRNA of Sendai virus. Preference will be given to applicants with prior experience in molecular/cellular biology. Animal cell culture experience is desirable but not required. Send curriculum vitae and the names (include e-mail addresses) of three people to contact for recommendations to: **Mark E. Peeples, Department of Immunology/Microbiology, Rush Medical College, 1653 West Congress Parkway, Chicago, IL 60612. E-mail: mark_peeples@rush.edu** or **William E. Walden, Department of Microbiology and Immunology, University of Illinois at Chicago, 835 South Wolcott, Chicago, IL 60612. E-mail: wwalden@uic.edu**. *Rush-Presbyterian-St. Luke's Medical Center, Rush Medical College, and the University of Illinois at Chicago are Equal Opportunity/Affirmative Action Employers.*

POSTDOCTORAL POSITION
DRUG DELIVERY

Applications are invited for a Postdoctoral position, available for a year with a possibility of extension, preferably commencing by December 1, 2002. The project is focusing on block copolymer-driven drug delivery and, in particular, drug release kinetics and polymer-drug interactions. The project will build on both experimental and modeling techniques that will facilitate molecular-up design strategies for drug delivery systems. Informal inquiries should be addressed to: **Dr. David Gidalevitz; e-mail: d.gdalevitz@leeds.ac.uk** or **Dr. Robert B. Hammond; e-mail: r.b.hammond@leeds.ac.uk**. Application packs are available from: **Mrs Joy Bielby, Institute for Materials Research, SPEME, University of Leeds, Leeds, LS2 9JT, England, UK. E-mail: mtljb@leeds.ac.uk; Telephone:+44 113 343 2348**.

POSTDOCTORAL FELLOW
Biophysical Chemistry

A Postdoctoral position is available for a motivated, qualified individual with an interest in using solution biophysical chemistry to tackle mechanisms of allostery in enzymes and transcription factors (*Biochemistry* **41**:2946, 6660, 11857, 2002). Candidates should submit current curriculum vitae and three references to: **James C. Lee, Department of Human Biological Chemistry and Genetics, The University of Texas Medical Branch, 5.138 Medical Research Building, Galveston, TX 77555-1055**. *UTMB is an Affirmative Action/Equal Opportunity Employer; Minorities/Females/Veterans/Disabled. Minorities and females are encouraged to apply.*

Two funded **POSTDOCTORAL POSITIONS** are available to join a research group that studies the pathogenesis of West Nile encephalitis and Dengue viruses. Our laboratory uses genetically deficient mice and recombinant viruses to identify how the immune system controls infection and novel viral targets for therapeutic intervention. Candidates with a Ph.D. or M.D. and a demonstrated track record in immunology and/or virology are sought. Applicants should send their curriculum vitae and three references to: **Michael Diamond, M.D., Ph.D., Department of Medicine, Washington University School of Medicine, Box 8051, 660 South Euclid Avenue, St. Louis, MO 63110. E-mail: mdiamond@im.wustl.edu**.

POSITIONS OPEN

WETLAND ECOLOGIST
University of North Texas

The University of North Texas Department of Biological Science is seeking an outstanding faculty member with a background in wetland ecology who incorporates scientific approaches to the study of applied environmental questions with an emphasis on integrating plant community responses to environmental conditions and perturbations. The person we seek will work in the application of fundamental ecological principles to address the need for applied information on wetland community structure and function for purposes of protection, rehabilitation, and maintenance. Expertise in terrestrial and aquatic plant ecology is desired. The successful candidate will be expected to be an active member of the UNT Graduate Environmental Science Program and the Division of Environmental Science in the Department. We expect this tenure-track appointment to be made at the **ASSISTANT PROFESSOR** level. The successful candidate will show ample evidence of the ability to fund and carry out high-quality research, teach effectively at the graduate and undergraduate levels, and mentor graduate students. Review of applications will begin on December 1, 2002, and will remain open until filled. Further information on the Department of Biological Sciences and the Graduate Environmental Science Program can be found at **websites: http://www.ias.unt.edu**. and **http://www.biol.unt.edu**. Applicants should send letter of interest and further research directions, curriculum vitae, names and contact information for at least three references, and up to three reprints or manuscripts to:

Dr. Ken Dickson
Wetland Ecologist Search Committee
Environmental Science Program
University of North Texas
P.O. Box 310559
Denton, TX 76203

The University of North Texas is an Equal Opportunity/Affirmative Action Institution committed to diversity in its Employment and Educational programs, thereby creating a welcoming environment for everyone.

FELLOWSHIPS

POSTDOCTORAL TEACHING FELLOWSHIPS
at PRINCETON UNIVERSITY
Council on Science and Technology

The Council on Science and Technology at Princeton University is seeking applicants for its Postdoctoral Teaching Fellows Program. The Program provides from one to three years of stipend support to Postdoctoral Fellows who wish to obtain further training in both research and teaching. The Fellows will be involved in Princeton's undergraduate teaching program and will conduct research with a Princeton University science or engineering faculty member. Applications are currently being accepted for fall 2003. The application deadline is December 31, 2002. Eligibility requirements, applications, and other information can be found on the Council's **website: http://www.princeton.edu/~stcweb**.

Carol Prevost, Associate Director of
the Council on Science and Technology
5 Peyton Hall, Princeton University
Princeton, NJ 08544
Telephone: 609-258-4316; FAX: 609-258-1020;
e-mail: cprevost@princeton.edu

Princeton University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH POSITIONS available at the New York University Hospital for Joint Diseases Musculoskeletal Research Center to conduct studies on skeletal development, cartilage repair, gene therapy, and stem cell differentiation. Experience with molecular biology and transgenic and recombinant protein techniques preferred. **E-mail: lorrashe@yahoo.com; FAX: 212-598-6096**.

Department of Health and Human Services
National Institutes of Health
National Cancer Institute

The National Institute of Allergy and Infectious Diseases (NIAID) and the National Cancer Institute (NCI) invite the submission of proposals to:

NIH Inter-Institute Program for the Development of AIDS-Related Therapeutics (IIP)

IIP will use its contract resources to facilitate the preclinical development of :
(1) Therapies for the treatment of HIV disease, AIDS-associated malignancies, opportunistic infections and tuberculosis associated with AIDS

(2) Microbicides-based prevention strategies for HIV

IIP does not provide funding to investigators. Successful applicants instead will receive products or information generated by NIH contractors to aids applicant's development of novel therapeutics toward clinical trial.

- The next deadline for receipt of applications is **December 1, 2002;** prior to that date (no later than November 1, 2002) a Letter of Intent must be submitted to the Inter-Institute Program Coordinator.
- Further information about this program can be found at http://dtp.nci.nih.gov/
- Inquiries can be made to the Inter-Institute Program Coordinator by telephone at 301-496-8720 or by email to iip@dtpax2.ncifcrf.gov

NATIONAL CANCER INSTITUTE

WORKSHOPS

Announcement and Invitation

U.S. Climate Change Science Program: Planning Workshop for Scientists and Stakeholders

Sponsored by the participating federal agencies in the U.S. Climate Change Science Program, Incorporating USGCRP and CCRI

December 3-5, 2002
Marriott Wardman Park Hotel, 2660 Woodley Road, NW, Washington, D.C.

The United States Climate Change Science Program will hold a comprehensive Workshop on the U.S. Climate Change Science Program to receive comments on a discussion draft version of its Strategic Plan for climate change and global change studies. The Workshop will review the U.S. Global Change Research Program and Climate Change Research Initiative (USGCRP/CCRI) plans with emphasis on the development of short-term (2-5 years) products to support climate change policy and resource management decision-making. The discussion draft of the Strategic Plan will be posted on the website **www.climatescience.gov** by mid-November 2002 for scientific and public review.

Members of the scientific, stakeholder, resource management, and international climate change communities who are interested in reviewing and commenting on the plans and expected deliverables of the USGCRP/CCRI research program are encouraged to attend.

Several senior U.S.–based and international science and user group leaders have been invited to be keynote speakers for the plenary sessions.

Registration and Logistical Information is available at the website **www.climatescience.gov**. Pre-registration by November 15 is recommended.

www.climatescience.gov

FELLOWSHIPS

The Earth Institute
AT COLUMBIA UNIVERSITY

COLUMBIA'S EARTH INSTITUTE DIRECTOR JEFFREY D. SACHS SEEKS OUTSTANDING SCHOLARS TO APPLY TO BECOME

EARTH INSTITUTE FELLOWS

The Fellows Program is the premier program in the world for those dedicated to better understanding critical scientific and social issues to meet global sustainable development goals. Fellows will be guided by a multidisciplinary team of outstanding, committed senior scientists from a diverse group of Earth Institute research units and departments across Columbia University.

The Earth Institute is the world's academic pioneer in mobilizing the sciences and public policy in pursuit of a sustainable future, especially for the world's poor. More than 800 scientists are applying their expertise to reduce hunger, disease, and environmental degradation, particularly in nations ravaged by the AIDS pandemic, climate change, and extreme poverty.

The Fellows Program has significantly expanded. Designed to provide young, innovative scholars with the opportunity to build a foundation in one of the core disciplines represented within the Earth Institute (i.e., any of the social sciences, Earth sciences, biological sciences, engineering sciences, or health sciences), the program offers a unique intellectual surrounding that fosters cross-disciplinary interaction, research, and education.

Senior scientists interested in redirecting their career paths may also apply to the program. Specifically, candidates are sought who have demonstrated intellectual excellence and commitment and who desire a research career, within or across disciplines, that addresses sustainable development. Applicants are encouraged to visit www.earth.columbia.edu/postdoc/. Earth Institute fellowships will ordinarily be granted for a period of 24 months.

Candidates should submit a proposal for research based in one of the core disciplines mentioned above. The proposal should indicate how the research will contribute to the goal of global sustainable development. Applicants should also indicate the general direction of the disciplinary, multidisciplinary, or interdisciplinary training and research that they would like to pursue at the Earth Institute. This may represent the candidate's novel ideas or indicate interest in existing Earth Institute projects. Successful applicants will have the opportunity to engage in a modest amount of teaching, if they so desire.

Proposals will be evaluated by the Earth Institute Academic Committee on the basis of the strength of the research proposal and relevance to the Earth Institute's goals.

Application forms may be completed on line or printed from the Web:

http://www.earth.columbia.edu/postdoc/.

They can also be obtained by contacting:

Postdoctoral Fellows Selection Committee
The Earth Institute at Columbia University
535 West 116th Street, Mail Code 4335
New York, NY 10027
Telephone: (212) 854-3893 Fax: (212) 854-1993

Applications submitted by January 17, 2003, will be considered for fellowships starting in the summer or fall of 2003, and fellowship offers will be made early in March 2003.

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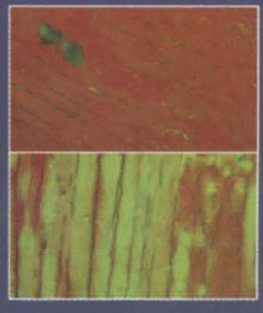

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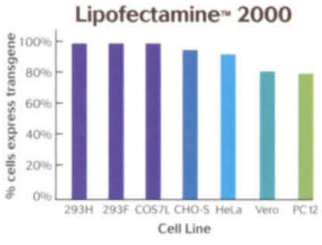

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